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=> d his

     (FILE 'HOME' ENTERED AT 13:06:49 ON 19 AUG 2007)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 13:07:05 ON 19 AUG 2007
L1             3 S NAG (P) PASTEUR?
L2             0 S N-GLUCOSAMINE? (P) PASTEUR?
L3            29 S N-ACETYLGLUCOSAMINE? (P) PASTEUR?
L4             0 S L3 AND CHITIN?
L5             0 S L3 AND BIOMASS?
L6             0 S L3 AND FUNGAL?
L7             0 S L3 AND BEVER?
L8           181 S BEVERAGE? (P) PASTEURIZE?
L9            43 S BEVERAGE? (P) PASTEURIZE? (P) TEMP?
L10            1 S BEVERAGE? (P) PASTEURIZE? (P) TEMP? (P) 200
L11            2 S BEVERAGE? (P) PASTEURIZE? (P) TEMP? (P) SEDIMEN?
L12           41 S L9 NOT L11
L13            6 S L12 AND SUGAR?
L14           35 S L12 NOT L13
L15            0 S L14 AND PRECIPITA?
L16            0 S L14 AND PRECIPIT?
L17            2 S L14 AND PURI?
L18           33 S L14 NOT L17
L19            2 S L18 AND PURE
L20            0 S L18 NOT L9
L21            0 S L14 NOT L9
L22           31 S L18 NOT L19
L23            4 S L22 AND BACTER?
L24           27 S L22 NOT L23
L25            0 S L24 AND CONTAMIN?
L26           31 S L22 NOT SPOIL?
L27            0 S L24 AND SPOIL?
L28           15 S L24 AND DEGR?
L29           16 S L26 NOT L28

     FILE 'REGISTRY' ENTERED AT 13:52:59 ON 19 AUG 2007
                E N-ACETYLGLUCOSAMINE/CN
L30            1 S E3

     FILE 'CAPLUS, MEDLINE' ENTERED AT 13:56:06 ON 19 AUG 2007
L31         9732 S L30
L32           44 S L31 AND BEVERAGE?
L33            0 S L32 AND PASTER?
L34            1 S L32 AND PASTEUR?
L35           43 S L32 NOT L34
L36           26 S L35 AND FOOD?
L37           17 S L35 NOT L36
L38            3 S L31 AND PASTEURIZE?
L39            0 S L31 AND PASTEURISE?
L40          233 S L31 AND MILK
L41           38 S L40 AND DEGREE?
L42         4754 S MILK (P) PASTEURIZE?
L43          796 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE?
L44           43 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE? (P) 200
L45           15 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE? (P) 250
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L1 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:412768 CAPLUS
DOCUMENT NUMBER: 140:422798
TITLE: N-acetyl-D-glucosamine supplemented food products and beverages
INVENTOR(S): Rogers, Brent Daniel; Fosdick, Lawrence E.; Bohlmann, John Andrew
PATENT ASSIGNEE(S): Cargill, Incorporated, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041199	A2	20040521	WO 2003-US34846	20031031
WO 2004041199	A3	20040923		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003286848	A1	20040607	AU 2003-286848	20031031
US 2006003965	A1	20060105	US 2005-533414	20050429
US 2006172392	A1	20060803	US 2006-394981	20060331
US 2006178344	A1	20060810	US 2006-395013	20060331

PRIORITY APPLN. INFO.:

US 2002-423119P	P	20021101
US 2001-785695	B1	20010216
WO 2002-US25121	A2	20020807
US 2002-326549	A2	20021219
US 2003-685125	A2	20031013
WO 2003-US34846	W	20031031

AB Food products and beverages which include N-acetyl-D-glucosamine (NAG) are provided, as are methods of their preparation and use. Embodiments of the supplemented food products and beverages are heated to high temps., such as those used in pasteurization, without significant adverse effects on taste, color, odor and/or texture.

L1 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:701396 CAPLUS
DOCUMENT NUMBER: 132:221651
TITLE: Study of methods to routinely monitor heat load to cheese milk
AUTHOR(S): Ardo, Ylva; Lindblad, Ola; Qvist, Karsten B.
CORPORATE SOURCE: Department of Dairy and Food Science, Dairy Technology, The Royal Veterinary and Agricultural University, Frederiksberg, DK-1958, Den.
SOURCE: International Dairy Journal (1999), 9(8), 547-552
CODEN: IDAJE6; ISSN: 0958-6946
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The quality of cheese made from pasteurized milk depends on limitation of the heat load to cheese milk. Anal. of heat denatured whey proteins and inactivated milk enzymes were evaluated for routine testing of heat load using pasteurization and microfiltration equipment

currently used in the production of semi-hard cheese. Significant differences between the routinely used milk treatments were seen when heat denatured α-lactalbumin and β-lactoglobulin were analyzed by capillary electrophoresis, or the inactivation of two milk enzymes were analyzed with simple colorimetric methods. GGT, γ-glutamyl transpeptidase (EC 2.3.2.2) retained 35-70% of its activity and NAG, N-acetyl-β-glucosaminidase (EC 3.2.1.30) 1-12% after the milk treatments. The results show that, similar to the alkaline phosphatase test for pasteurized milk, tests can be developed that give an NAG pos. result to assure that the properties of importance to cheese ripening have not been lost.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 3 MEDLINE on STN

ACCESSION NUMBER: 2000389344 MEDLINE

DOCUMENT NUMBER: PubMed ID: 10898291

TITLE: The ultrastructure and metabolism of ejaculated tammar wallaby sperm are impaired by swim-up procedures when compared with sperm from the cauda epididymidis.

AUTHOR: Murdoch R N; Jones R C; Wade M; Lin M

CORPORATE SOURCE: Cooperative Research Centre for the Conservation and Management of Marsupials, The Department of Biological Sciences, The University of Newcastle, Callaghan, NSW, Australia.. rmurdoch@mail.newcastle.edu.au

SOURCE: Reproduction, fertility, and development, (1999) Vol. 11, No. 4-5, pp. 263-71.
Journal code: 8907465. ISSN: 1031-3613.

PUB. COUNTRY: Australia

DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200008

ENTRY DATE: Entered STN: 18 Aug 2000
Last Updated on STN: 18 Aug 2000
Entered Medline: 4 Aug 2000

AB The metabolism, rate of intracellular accumulation of sugars, motility and ultrastructure of ejaculated tammar sperm were impaired by swim-up into artificial media, particularly when the cells were subsequently exposed to N-acetyl-D-glucosamine (NAG). The inclusion of hyaluronate, serum albumin, catalase or Desferal in swim-up media helped prevent deterioration of sperm motility, but failed to prevent detrimental NAG-induced metabolic and ultrastructural changes. However, the sperm were unavoidably diluted during swim-up into artificial media and their behavioural properties were modified by dilution. Thus, sperm collected from the cauda epididymidis were immotile and their rate of oxygen uptake was low in undiluted caudal epididymal semen (CES). Nevertheless, these sperm were viable, and vigorous motility was induced by 5- to 50-fold dilution in Krebs-Ringer phosphate (KRP). Sperm respiration also dramatically increased with moderate dilution (5- or 15-fold) in KRP, but decreased again at higher rates (50-fold). This suggested that motility and the metabolic properties of tammar sperm are modified both by dilution and on leaving the suppressing conditions of the epididymis. Diluted tammar epididymal sperm also displayed a Pasteur effect, but rapidly lost capacity for motility in an oxygen-depleted atmosphere. It was concluded that swim-up procedures compromise ejaculated tammar sperm by promoting dilution-induced changes. This may alter the permeability of the membrane with loss of the enzymes that process the ammonia generated during the metabolism of NAG in seminal plasma. Subsequent exposure to NAG further promotes ultrastructural damage culminating in loss of viability.

L3 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:426800 CAPLUS
DOCUMENT NUMBER: 122:185541
TITLE: N-acetylglucosamine-containing cellulose manufacture with microorganism
INVENTOR(S): Tokura, Seiichi; Takai, Mitsuo; Ogawa, Masato; Fukaya, Masahiro; Kanegae, Juko; Okumura, Hajime; Kawamura, Kicha
PATENT ASSIGNEE(S): Nakano Suten Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07000193	A	19950106	JP 1993-165905	19930614
PRIORITY APPLN. INFO.:			JP 1993-165905	19930614

AB The N-acetylglucosamine-containing cellulose (I) is manufactured by aerobically culturing I-producing microorganism in the presence of carriers such as stainless. The production and qualities of I are comparable to to higher than that of still-culture. Production enhancement of I with Acetobacter pasteurianus in the presence of stainless met was shown.

L3 ANSWER 20 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2007052896 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17173853
TITLE: Quantitative continuous assay for hyaluronan synthase.
AUTHOR: Krupa Joanne C; Shaya David; Chi Lianli; Linhardt Robert J; Cygler Miroslaw; Withers Stephen G; Mort John S
CORPORATE SOURCE: Joint Diseases Laboratory, Shriners Hospital for Children, Montreal, Que., Canada H3G 1A6.
CONTRACT NUMBER: GM38060 (NIGMS)
HL62244 (NHLBI)
SOURCE: Analytical biochemistry, (2007 Feb 15) Vol. 361, No. 2, pp. 218-25. Electronic Publication: 2006-11-27.
Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200704
ENTRY DATE: Entered STN: 30 Jan 2007
Last Updated on STN: 18 Apr 2007
Entered Medline: 17 Apr 2007

AB A rapid, continuous, and convenient three-enzyme coupled UV absorption assay was developed to quantitate the glucuronic acid and N-acetylglucosamine transferase activities of hyaluronan synthase from Pasteurella multocida (PmHAS). Activity was measured by coupling the UDP produced from the PmHAS-catalyzed transfer of UDP-GlcNAc and UDP-GlcUA to a hyaluronic acid tetrasaccharide primer with the oxidation of NADH. Using a fluorescently labeled primer, the products were characterized by gel electrophoresis. Our results show that a truncated soluble form of recombinant PmHAS (residues 1-703) can catalyze the glycosyl transfers in a time- and concentration-dependent manner. The assay can be used to determine kinetic parameters, inhibition constants, and mechanistic aspects of this enzyme. In addition, it can be used to quantify PmHAS during purification of the enzyme from culture media.

L3 ANSWER 21 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2006140796 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16361253
TITLE: Critical elements of oligosaccharide acceptor substrates for the Pasteurella multocida hyaluronan synthase.
AUTHOR: Williams Kellie J; Halkes Koen M; Kamerling Johannis P; DeAngelis Paul L
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Oklahoma Center for Medical Glycobiology, University of Oklahoma Health Sciences Center, 940 Stanton L. Young Boulevard, Oklahoma City, OK 73104, USA.
SOURCE: The Journal of biological chemistry, (2006 Mar 3) Vol. 281, No. 9, pp. 5391-7. Electronic Publication: 2005-12-16. Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T) (RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200605
ENTRY DATE: Entered STN: 14 Mar 2006
Last Updated on STN: 24 May 2006
Entered Medline: 23 May 2006

AB Three-dimensional structures are not available for polysaccharide synthases and only minimal information on the molecular basis for catalysis is known. The Pasteurella multocida hyaluronan synthase (PmHAS) catalyzes the polymerization of the alternating beta1,3-N-acetylglucosamine-beta1,4-glucuronic acid sugar chain by the sequential addition of single monosaccharides to the non-reducing terminus. Therefore, PmHAS possesses both GlcNAc-transferase and glucuronic acid (GlcUA)-transferase activities. The recombinant Escherichia coli-derived PmHAS enzyme will elongate exogenously supplied hyaluronan chains in vitro with either a single monosaccharide or a long chain depending on the UDP-sugar availability. Competition studies using pairs of acceptors with distinct termini (where one oligosaccharide is a substrate that may be elongated, whereas the other cannot) were performed here; the lack of competition suggests that PmHAS contains at least two distinct acceptor sites. We hypothesize that the size of the acceptor binding pockets of the enzyme corresponds to the size of the smallest high efficiency substrates; thus we tested the relative activity of a series of authentic hyaluronan oligosaccharides and related structural analogs. The GlcUA-transferase site readily elongates (GlcNAc-GlcUA)(2), whereas the GlcNAc-transferase elongates GlcUA-Glc-NAc-GlcUA. The minimally sized oligosaccharides, elongated with high efficiency, both contain a trisaccharide with two glucuronic acid residues that enabled the identification of a synthetic, artificial acceptor for the synthase. PmHAS behaves as a fusion of two complete glycosyltransferases, each containing a donor site and an acceptor site, in one polypeptide. Overall, this information advances the knowledge of glycosaminoglycan biosynthesis as well as assists the creation of various therapeutic sugars for medical applications in the future.

L3 ANSWER 22 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2005193589 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15826050
TITLE: Chemical indicators of heat treatment in fortified and special milks.
AUTHOR: Mendoza Maite Rada; Olano Agustin; Villamiel Mar
CORPORATE SOURCE: Instituto de Fermentaciones Industriales (CSIC), C/ Juan de la Cierva 3, 28006 Madrid, Spain.
SOURCE: Journal of agricultural and food chemistry, (2005 Apr 20) Vol. 53, No. 8, pp. 2995-9.

Journal code: 0374755. ISSN: 0021-8561.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200505
ENTRY DATE: Entered STN: 14 Apr 2005
Last Updated on STN: 27 May 2005
Entered Medline: 26 May 2005

AB Carbohydrate and furosine contents in 12 commercial fortified and special milk samples (pasteurized goat's and ewe's milks; ultrahigh-temperature (UHT) goat's milk, UHT milks fortified with calcium, magnesium, fiber, or royal jelly and honey; and lactose-hydrolyzed milks) were analyzed. Except for lactose-hydrolyzed milks, furosine, lactose, lactulose, galactose, glucose, N-acetylgalactosamine, N-acetylglucosamine, and myo-inositol contents were similar to the previously reported values for UHT or pasteurized milk samples. In lactose-hydrolyzed milks, lactulose was not detectable and lactose was present in low amount; high levels of glucose, galactose, fructose, tagatose, and furosine were also detected in this type of milk. Results found in commercial milks were compared to those obtained in laboratory-prepared UHT milks with lactose hydrolyzed prior to heating. Hydrolysis of lactose before thermal treatments promoted elevated accumulation of reducing sugars (galactose and glucose) that could be partially converted to the corresponding isomers (tagatose and fructose) during heating. In addition, the reducing sugars could also react with the amino groups of proteins, giving rise to the corresponding Amadori compound. According to the obtained results, heating prior to hydrolysis of lactose is suggested to avoid a considerable loss of available lysine.

L3 ANSWER 23 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2003420734 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12840012
TITLE: Rapid chemoenzymatic synthesis of monodisperse hyaluronan oligosaccharides with immobilized enzyme reactors.
AUTHOR: DeAngelis Paul L; Oatman Leonard C; Gay Daniel F
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Oklahoma Center for Medical Glycobiology, University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma 73104, USA.. paul-deangelis@ouhsc.edu
CONTRACT NUMBER: GM56497 (NIGMS)
SOURCE: The Journal of biological chemistry, (2003 Sep 12) Vol. 278, No. 37, pp. 35199-203. Electronic Publication: 2003-07-02.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200311
ENTRY DATE: Entered STN: 9 Sep 2003
Last Updated on STN: 13 Nov 2003
Entered Medline: 12 Nov 2003

AB We describe the chemoenzymatic synthesis of a variety of monodisperse hyaluronan (beta 4-glucuronic acid-beta 3-N-acetylglucosamine (HA)) oligosaccharides. Potential medical applications for HA oligosaccharides (approximately 10-20 sugars in length) include killing cancerous tumors and enhancing wound vascularization. Previously, the lack of defined oligosaccharides has limited the exploration of these sugars as components of new therapeutics.

The Pasteurella multocida HA synthase, pmHAS, a polymerizing enzyme that normally elongates HA chains rapidly (approximately 1-100 sugars/s), was converted by mutagenesis into two single-action glycosyltransferases (glucuronic acid transferase and N-acetylglucosamine transferase). The two resulting enzymes were purified and immobilized individually onto solid supports. The two types of enzyme reactors were used in an alternating fashion to produce extremely pure sugar polymers of a single length (up to HA20) in a controlled, stepwise fashion without purification of the intermediates. These molecules are the longest, non-block, monodisperse synthetic oligosaccharides hitherto reported. This technology platform is also amenable to the synthesis of medicant-tagged or radioactive oligosaccharides for biomedical testing. Furthermore, these experiments with immobilized mutant enzymes prove both that pmHAS-catalyzed polymerization is non-processive and that a monomer of enzyme is the functional catalytic unit.

L3 ANSWER 24 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2001530947 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11577688
TITLE: Kinetic properties of the acylneuraminate cytidylyltransferase from Pasteurella haemolytica A2.
AUTHOR: Bravo I G; Barrallo S; Ferrero M A; Rodriguez-Aparicio L B; Martinez-Blanco H; Reglero A
CORPORATE SOURCE: Departamento de Bioquimica y Biologia Molecular, Universidad de Leon, Campus Vegazana, Spain.
SOURCE: The Biochemical journal, (2001 Sep 15) Vol. 358, No. Pt 3, pp. 585-98.
Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 2 Oct 2001
Last Updated on STN: 29 Oct 2001
Entered Medline: 25 Oct 2001

AB Neuroinvasive and septicaemia-causing pathogens often display a polysialic acid capsule that is involved in invasive behaviour. N-Acetylneuraminic acid (NeuAc) is the basic monomer of polysialic acid. The activated form, CMP-Neu5Ac, is synthesized by the acylneuraminate cytidylyltransferase (ACT; EC 2.7.7.43). We have purified this enzyme from Pasteurella haemolytica A2 to apparent homogeneity (522-fold). The protein behaved homogeneously on SDS/PAGE as a 43 kDa band, a size similar to that of Escherichia coli, calf, mouse and rat. Specific activity in crude lysate displayed one of the highest values cited in the literature (153 m-units/mg). We have studied the steady-state kinetic mechanism of the enzyme by using normalized plot premises. The catalysis proceeds through a Ping Pong Bi Bi mechanism, with CTP as the first substrate and CMP-NeuAc as the last product. The true Km values were 1.77 mM for CTP and 1.82 mM for NeuAc. The nucleotides CDP, UTP, UDP and TTP, and the modified sialic acid N-glycolylneuraminic acid were also substrates of the ACT activity. The enzyme is inhibited by cytidine nucleotides through binding to a second cytidyl-binding site. This inhibition is greater with nucleotides that display a long phosphate tail, and the genuine inhibitor is the substrate CTP. At physiological concentrations, ATP is an activator, and AMP an inhibitor, of the ACT activity. The activated sugar UDP-N -acetylglucosamine acts as an inhibitor, thus suggesting cross-regulation of the peptidoglycan and polysialic acid pathways. Our findings provide new mechanistic insights into the nature of sialic acid activation and suggest new targets for the approach to the pathogenesis of encapsulated bacteria.

L3 ANSWER 25 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2001334132 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11401986
TITLE: Analysis of the capsule biosynthetic locus of Mannheimia (Pasteurella) haemolytica A1 and proposal of a nomenclature system.
AUTHOR: Lo R Y; McKerral L J; Hills T L; Kostrzynska M
CORPORATE SOURCE: Department of Microbiology, University of Guelph, Guelph, Ontario N1G 2W1, Canada.. RLO@micro.uoguelph.ca
SOURCE: Infection and immunity, (2001 Jul) Vol. 69, No. 7, pp. 4458-64.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF170495
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 23 Jul 2001
Last Updated on STN: 21 Mar 2003
Entered Medline: 19 Jul 2001

AB A 16-kbp DNA region that contains genes involved in the biosynthesis of the capsule of Mannheimia (Pasteurella) haemolytica A1 has been characterized. The gene cluster can be divided into three regions like those of the typical group II capsule biosynthetic clusters in gram-negative bacteria. Region 1 contains four genes (wzt, wzm, wzf, and wza) which code for an ATP-binding cassette transport apparatus for the secretion of the capsule materials across the membranes. The M. haemolytica A1 wzt and wzm genes were able to complement Escherichia coli kpsT and kpsM mutants, respectively. Further, the ATP binding activity of Wzt was demonstrated by its affinity for ATP-agarose, and the lipoprotein nature of Wza was supported by [(3)H]palmitate labeling. Region 2 contains six genes; four genes (orf1/2/3/4) code for unique functions for which no homologues have been identified to date. The remaining two genes (nmaA and nmaB) code for homologues of UDP-N-acetylglucosamine-2-epimerase and UDP-N-acetylmannosamine dehydrogenase, respectively. These two proteins are highly homologous to the E. coli WecB and WecC proteins (formerly known as RffE and RffD), which are involved in the biosynthesis of enterobacterial common antigen (ECA). Complementation of an E. coli rffE/D mutant with the M. haemolytica A1 nmaA/B genes resulted in the restoration of ECA biosynthesis. Region 3 contains two genes (wbrA and wbrB) which are suggested to be involved in the phospholipid modification of capsular materials.

L3 ANSWER 26 OF 29 MEDLINE on STN
ACCESSION NUMBER: 2000072700 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10603403
TITLE: Molecular cloning and mutagenesis of a DNA locus involved in lipooligosaccharide biosynthesis in Haemophilus somnus.
AUTHOR: Wu Y; McQuiston J H; Cox A; Pack T D; Inzana T J
CORPORATE SOURCE: Center for Molecular Medicine and Infectious Diseases, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061, USA.
SOURCE: Infection and immunity, (2000 Jan) Vol. 68, No. 1, pp. 310-9.
Journal code: 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LANGUAGE: English

FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF096997
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 24 Jan 2000
Last Updated on STN: 24 Jan 2000
Entered Medline: 11 Jan 2000

AB Haemophilus somnus undergoes antigenic and structural phase variation in its lipooligosaccharide (LOS). A gene (lob-1) containing repetitive 5'-CAAT-3' sequences that may, in part, contribute to phase variation was cloned and sequenced (T. J. Inzana et al., Infect. Immun. 65:4675-4681, 1997). We have now identified another putative gene (lob-2A) immediately upstream from lob-1. Lob-2A contained homology to several LOS biosynthesis proteins of the family Pasteurellaceae and the LgtB and LgtE galactosyltransferases of Neisseria meningitidis and N. gonorrhoeae. Unlike lob-1, lob-2A contained 18 to 20 5'-GA-3' repeats 141 bp upstream of the termination codon as determined by PCR amplification of DNA from individual colonies. Twenty repeats were most common, but when 19 5'-GA-3' repeats were present a stop codon would occur 1 bp after the last 5'-GA-3' repeat. A 630-bp SalI-BsgI fragment within lob-2A was deleted, and a kanamycin resistance (Km(r)) gene was inserted into this site to create pCAATDeltalob2A. Following electroporation of pCAATDeltalob2A into H. somnus 738, several allelic exchange mutants were isolated. The LOS electrophoretic profile of one mutant, strain 738-lob2A1::Km, was altered, and the phase variation rate was reduced but phase variation was not eliminated. A variant with 19 5'-GA-3' repeats in lob-2A had an LOS profile similar to that of 738-lob2A1::Km, suggesting that lob-2A was turned off in this phase. Nanoelectrospray mass spectrometry (nES-MS) and nuclear magnetic resonance spectroscopy showed that 738-lob2A1::Km was deficient in the terminal betaGal(1-3)betaGlcNAc residue present in parent strain 738. Mutant 738-lob2A1::Km was significantly more sensitive to the bactericidal action of normal bovine serum and was less virulent in mice than was parent strain 738. When H. somnus 129Pt was electrotransformed with shuttle vector pLS88 containing lob-2A, its LOS electrophoretic profile was modified and additional N-acetylhexosamine residues were present, as determined by nES-MS analysis. These results indicated that lob-2A may be an N-acetylglucosamine transferase involved in LOS biosynthesis and phase variation and that LOS structure is important to H. somnus virulence.

L3 ANSWER 27 OF 29 MEDLINE on STN
ACCESSION NUMBER: 96312891 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8703949
TITLE: Enzymological characterization of the Pasteurella multocida hyaluronic acid synthase.
AUTHOR: DeAngelis P L
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City 73190, USA.
SOURCE: Biochemistry, (1996 Jul 30) Vol. 35, No. 30, pp. 9768-71. Journal code: 0370623. ISSN: 0006-2960.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY) Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199609
ENTRY DATE: Entered STN: 19 Sep 1996
Last Updated on STN: 3 Feb 1997
Entered Medline: 10 Sep 1996

AB Hyaluronic acid (HA), a linear polysaccharide composed of alternating glucuronic acid and N-acetylglucosamine residues, is an essential molecule of higher vertebrates. The fowl cholera pathogen

Pasteurella multocida Carter Type A also produces HA in the form of an extracellular capsule in order to evade host defenses. HA synthase activity could be obtained from cell-free membrane preparations of P. multocida. The enzyme utilized UDP-sugar precursors of HA in the presence of Mg2+ or Mn2+ at neutral pH. Mn2+ at 1 mM stimulated approximately 2-fold more incorporation than Mg2+ at 10 mM. On the other hand, the analogous enzyme from group A Streptococcus, HasA, is stimulated more by Mg2+ than Mn2+. The apparent Michaelis constants, K(M), of the P. multocida HA synthase for UDP-N-acetylglucosamine and UDP-glucuronic acid were estimated to be approximately 75 and approximately 20 microM, respectively, in the presence of Mg2+, which suggests that the substrates are bound with 2-3-fold higher affinity than by the HasA enzyme. The rate enhancement observed with Mn2+ is apparently not due to better binding of the sugar nucleotide precursors complexed to Mn ion because the K(M) value, a measure of substrate affinity, increases by 25-50% in comparison to Mg2+. In summary, the HA synthase from P. multocida, a Gram-negative bacterium, has kinetic optima distinct from those of HasA, the analog from the Gram-positive group A Streptococcus.

L3 ANSWER 28 OF 29 MEDLINE on STN
ACCESSION NUMBER: 95288936 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7771054
TITLE: Lectin histochemistry of normal and herpesvirus-infected bovine nasal mucosa.
AUTHOR: Mosier D A; Simons K R; Briggs D J; Uhlich G A
CORPORATE SOURCE: Department of Pathology and Microbiology, College of Veterinary Medicine, Kansas State University, Manhattan, USA.
SOURCE: Veterinary pathology, (1995 Mar) Vol. 32, No. 2, pp. 140-6. Journal code: 0312020. ISSN: 0300-9858.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, U.S. GOV'T, NON-P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199507
ENTRY DATE: Entered STN: 13 Jul 1995
Last Updated on STN: 13 Jul 1995
Entered Medline: 6 Jul 1995

AB Proliferation of Pasteurella haemolytica serotype 1 in the nasal cavity following stress or viral infection is an important event in the pathogenesis of bovine pneumonic pasteurellosis. Enhanced adhesion of P. haemolytica to nasal mucosa could be one factor that predisposes animals to this proliferation. Nasal mucosa from normal and bovine herpesvirus-1 (BHV1)-infected cattle were examined histochemically for their glycoconjugate composition. Twenty lectins were screened, six of which were chosen for subsequent study. Three of these were specific for N-acetylgalactosamine (NAGal) (Dolichos biflorus, Glycine max, and Vicia villosa), and one each was specific for N-acetylgalactosamine/galactose (Griffonia simplicifolia-I), mannose/glucose (Canavalia ensiformis), and N-acetylglucosamine (Triticum vulgaris). For the surface mucosa and submucosal glands, there was greater reactivity in samples from BHV1-infected than from normal cattle for all six lectins. Reactivity was most prominent for the NAGal-specific lectins. Neuraminidase treatment of samples from normal and BHV1-infected cattle tended to result in greater lectin reactivity. Lectin reactivity was generally more intense in focally inflamed areas, but diffuse reactivity was not substantially affected by inflammation. BHV1-induced alteration of nasal mucosal glycoconjugates could enhance adhesion and colonization of P. haemolytica to nasal surfaces and may be one factor responsible for the increased number of P. haemolytica serotype 1 in the nasal cavity following viral infection.

L3 ANSWER 29 OF 29 MEDLINE on STN

ACCESSION NUMBER: 92226181 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1808209
TITLE: Characterisation of potential adhesins of the bacterium Pasteuria penetrans, and of putative receptors on the cuticle of Meloidogyne incognita, a nematode host.
AUTHOR: Persidis A; Lay J G; Manousis T; Bishop A H; Ellar D J
CORPORATE SOURCE: University of Cambridge, Department of Biochemistry, UK.
SOURCE: Journal of cell science, (1991 Nov) Vol. 100 (Pt 3), pp. 613-22.
Journal code: 0052457. ISSN: 0021-9533.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199205
ENTRY DATE: Entered STN: 7 Jun 1992
Last Updated on STN: 7 Jun 1992
Entered Medline: 20 May 1992

AB Pasteuria penetrans spores were fragmented by glass bead vortexing, producing exosporial membranes and spore fragments, which consisted of fibre bundles. Both exosporia and spore fragments are capable of host-specific attachment to the cuticle of Meloidogyne incognita, a root-knot nematode host. Putative M. incognita receptors appear to be soluble in beta-mercaptoethanol (BME) but not SDS, and are also sensitive to tryptic digestion and deglycosylation by endoglycosidase F. Polyclonal antibodies against intact spores and spore fragments of antispore antibodies produced 100% inhibition. The antibodies, however, did not show preferential staining of particular spore structures in thin section immunolabelling studies. Exposure of Pasteuria penetrans spores to HCl or urea-SDS-dithiothreitol renders them incapable of attachment to their host juveniles and extensively disrupts fibres that surround the spore core. Protein extracts from spore fragments or from exosporial membranes are identical, and urea-BME extracts from either structure, but not SDS extracts, can inhibit the attachment of spores to juveniles by 60-80%. An inhibitory BME extract from spore fragments was analysed by anion-exchange chromatography and adsorption onto host cuticle followed by immunoblotting. It appeared to contain six potential spore adhesins of approximate Mr 24-29, 38-47, 59, 89, 126, and 190 (x10(3)). Lectin affinity blotting with wheat germ agglutinin and concanavalin A showed that all of these proteins bear terminal N-acetylglucosamine residues and the 38-47 kDa band also bears terminal Glc/Man residues.(ABSTRACT TRUNCATED AT 250 WORDS)

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:730302 CAPLUS
DOCUMENT NUMBER: 136:17167
TITLE: Kinetic properties of the acylneuraminate cytidylyltransferase from Pasteurella haemolytica A2
AUTHOR(S): Bravo, Ignacio G.; Barrallo, Sofia; Ferrero, Miguel A.; Rodriguez-Aparicio, Leandro B.; Martinez-Blanco, Honorina; Reglero, Angel
CORPORATE SOURCE: Departamento de Bioquimica y Biologia Molecular, Universidad de Leon, Leon, 24071, Spain
SOURCE: Biochemical Journal (2001), 358(3), 585-598
CODEN: BIJOAK; ISSN: 0264-6021
PUBLISHER: Portland Press Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Neuroinvasive and septicemia-causing pathogens often display a polysialic acid capsule that is involved in invasive behavior. N-Acetylneuraminic acid (NeuAc) is the basic monomer of polysialic acid. The activated form, CMP-Neu5Ac, is synthesized by the acylneuraminate cytidylyltransferase (ACT; E.C. 2.7.7.43). We have purified this enzyme from Pasteurella haemolytica A2 to apparent homogeneity (522-fold). The protein behaved homogeneously on SDS-PAGE as a 43 kDa band, a size similar to that of Escherichia coli, calf, mouse and rat. Specific activity in crude lysate displayed one of the highest values cited in the literature (153 m-units/mg). We have studied the steady-state kinetic mechanism of the enzyme by using normalized plot premises. The catalysis proceeds through a Ping Pong Bi Bi mechanism, with CTP as the first substrate and CMP-NeuAc as the last product. The true Km values were 1.77 mM for CTP and 1.82 mM for NeuAc. The nucleotides CDP, UTP, UDP and TTP, and the modified sialic acid N-glycolylneuraminic acid were also substrates of the ACT activity. The enzyme is inhibited by cytidine nucleotides through binding to a second cytidyl-binding site. This inhibition is greater with nucleotides that display a long phosphate tail, and the genuine inhibitor is the substrate CTP. At physiol. concns., ATP is an activator, and AMP an inhibitor, of the ACT activity. The activated sugar UDP-N-acetylglucosamine acts as an inhibitor, thus suggesting cross-regulation of the peptidoglycan and polysialic acid pathways. Our findings provide new mechanistic insights into the nature of sialic acid activation and suggest new targets for the approach to the pathogenesis of encapsulated bacteria.
REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:473708 CAPLUS
DOCUMENT NUMBER: 136:145901
TITLE: Analysis of the capsule biosynthetic locus of Mannheimia (Pasteurella) haemolytica A1 and proposal of a nomenclature system
AUTHOR(S): Lo, Reggie Y. C.; McKerral, Linda J.; Hills, Tanya L.; Kostrzynska, Magdalena
CORPORATE SOURCE: Department of Microbiology, University of Guelph, Guelph, ON, N1G 2W1, Can.
SOURCE: Infection and Immunity (2001), 69(7), 4458-4464
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A 16-kbp DNA region that contains genes involved in the biosynthesis of the capsule of Mannheimia (Pasteurella) haemolytica A1 has been characterized. The gene cluster can be divided into three regions like those of the typical group II capsule biosynthetic clusters in gram-neg. bacteria. Region 1 contains four genes (wzt, wzm, wzf, and wza) which

code for an ATP-binding cassette transport apparatus for the secretion of the capsule materials across the membranes. The M. haemolytica A1 wzt and wzm genes were able to complement Escherichia coli kpsT and kpsM mutants, resp. Further, the ATP binding activity of Wzt was demonstrated by its affinity for ATP-agarose, and the lipoprotein nature of Wza was supported by [3H]palmitate labeling. Region 2 contains six genes; four genes (orf1/2/3/4) code for unique functions for which no homologues have been identified to date. The remaining two genes (nmaA and nmaB) code for homologues of UDP-N-acetylglucosamine-2-epimerase and UDP-N-acetylmannosamine dehydrogenase, resp. These two proteins are highly homologous to the E. coli WecB and WecC proteins (formerly known as RffE and RffD), which are involved in the biosynthesis of enterobacterial common antigen (ECA). Complementation of an E. coli rffE/D mutant with the M. haemolytica A1 nmaA/b genes resulted in the restoration of ECA biosynthesis. Region 3 contains two genes (wbrA and wbrB) which are suggested to be involved in the phospholipid modification of capsular materials.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:312191 CAPLUS
DOCUMENT NUMBER: 135:75987
TITLE: Influence of refrigeration and carbon dioxide addition to raw milk on microbial levels, free monosaccharides and myo-inositol content of raw and pasteurized milk
AUTHOR(S): Ruas-Madiedo, Patricia; De los Reyes-Gavilan, Clara G.; Olano, Agustin; Villamiel, Mar
CORPORATE SOURCE: Instituto de Productos Lacteos de Asturias (CSIC), Villaviciosa, 33300, Spain
SOURCE: European Food Research and Technology (2000), 212(1), 44-47
CODEN: EFRTFO; ISSN: 1438-2377
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The influence of CO2 treatment on free monosaccharides and myo-inositol in raw and pasteurized milk during cold storage was studied. Pasteurization did not cause significant changes in the monosaccharide fraction. No variations in the level of galactose and myo-inositol in untreated and CO2-treated samples were observed during cold storage. The content of glucose decreased considerably during cold storage due to bacterial growth in pasteurized milk. During cold storage of pasteurized milk no changes in N-acetylgalactosamine were observed, whereas N-acetylglucosamine decreased considerably after 15 days. No differences between untreated and CO2-treated milks were found. A substantial decrease in N-acetylglucosamine and a gradual increase in N-acetylgalactosamine were observed in raw milk during cold storage. The former was attributed to consumption of this hexosamine by microorganisms and the latter was probably due to microbial glycosidic enzymes. The addition of CO2 to raw milk proved to be a useful treatment for milk preservation without modifying the free monosaccharide fraction.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:223966 CAPLUS
DOCUMENT NUMBER: 136:32387
TITLE: Genetic organization of Pasteurella multocida cap loci and development of a multiplex capsular PCR typing system
AUTHOR(S): Townsend, Kirsty M.; Boyce, John D.; Chung, Jing Y.; Frost, Alan J.; Adler, Ben

CORPORATE SOURCE: Veterinary Pathology and Anatomy, School of Veterinary Science and Animal Production, The University of Queensland, Brisbane, 4072, Australia
SOURCE: Journal of Clinical Microbiology (2001), 39(3), 924-929
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Current serotyping methods classify Pasteurella multocida into five capsular serogroups (serogroups A, B, D, E, and F) and 16 somatic serotypes (serotypes 1 to 16). In the present study, we have developed a multiplex PCR assay as a rapid alternative to the conventional capsular serotyping system. The serogroup-specific primers used in this assay were designed following identification, sequence determination, and anal. of the capsular biosynthetic loci of each capsular serogroup. The entire capsular biosynthetic loci of P. multocida A:1 (X-73) and B:2 (M1404) have been cloned and sequenced previously. Nucleotide sequence anal. of the biosynthetic region (region 2) from each of the remaining three serogroups, serogroups D, E, and F, identified serogroup-specific regions and gave an indication of the capsular polysaccharide composition The multiplex capsular PCR assay was highly specific, and its results, with the exception of those for some serogroup F strains, correlated well with conventional serotyping results. Sequence anal. of the strains that gave conflicting results confirmed the validity of the multiplex PCR and indicated that these strains were in fact capsular serogroup A. The multiplex PCR will clarify the distinction between closely related serogroups A and F and constitutes a rapid assay for the definitive classification of P. multocida capsular types.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:656053 CAPLUS
DOCUMENT NUMBER: 133:331380
TITLE: Dissection of the two transferase activities of the Pasteurella multocida hyaluronan synthase: two active sites exist in one polypeptide
AUTHOR(S): Wei, Jing; DeAngelis, Paul L.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, 73104, USA
SOURCE: Glycobiology (2000), 10(9), 883-889
CODEN: GLYCE3; ISSN: 0959-6658
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Type A Pasteurella multocida, an animal pathogen, employs a hyaluronan [HA] capsule to avoid host defenses. PmHAS, the 972-residue membrane-associated hyaluronan synthase, catalyzes the transfer of both GlcNAc and GlcUA to form the HA polymer. To define the catalytic and membrane-associated domains, pmHAS mutants were analyzed. PmHAS1-703 is a soluble, active HA synthase suggesting that the carboxyl-terminus is involved in membrane association of the native enzyme. PmHAS1-650 is inactive as a HA synthase, but retains GlcNAc-transferase activity. Within the pmHAS sequence, there is a duplicated domain containing a short motif, Asp-Gly-Ser, that is conserved among many β-glycosyltransferases. Changing this aspartate in either domain to asparagine, glutamate, or lysine reduced the HA synthase activity to low levels. The mutants substituted at residue 196 possessed GlcUA-transferase activity while those substituted at residue 477 possessed GlcNAc-transferase activity. The Michaelis consts. of the functional transferase activity of the various mutants, a measure of the apparent affinity of the enzymes for the precursors, were similar to wild-type values. Furthermore, mixing D196N and D477K mutant proteins

in the same reaction allowed HA polymerization at levels similar to the wild-type enzyme. These results provide the first direct evidence that the synthase polypeptide utilizes two sep. glycosyltransferase sites.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:16736 CAPLUS

DOCUMENT NUMBER: 132:161912

TITLE: Molecular cloning and mutagenesis of a DNA locus involved in lipooligosaccharide biosynthesis in Haemophilus somnus

AUTHOR(S): Wu, Yanping; McQuiston, Jennifer H.; Cox, Andrew; Pack, Todd D.; Inzana, Thomas J.

CORPORATE SOURCE: Center for Molecular Medicine and Infectious Diseases, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Polytechnic Institute and State University, Blacksburg, VA, 24061, USA

SOURCE: Infection and Immunity (2000), 68(1), 310-319
CODEN: INFIBR; ISSN: 0019-9567

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Haemophilus somnus undergoes antigenic and structural phase variation in its lipooligosaccharide (LOS). A gene (lob-1) containing repetitive 5'-CAAT-3' sequences that may, in part, contribute to phase variation was cloned and sequenced. We have now identified another putative gene (lob-2A) immediately upstream from lob-1. Lob-2A contained homol. to several LOS biosynthesis proteins of the family Pasteurellaceae and the LgtB and LgtE galactosyltransferases of Neisseria meningitidis and N. gonorrhoeae. Unlike lob-1, lob-2A contained 18 to 20 5'-GA-3' repeats 141 bp upstream of the termination codon as determined by PCR amplification of DNA from individual colonies. Twenty repeats were most common, but when 19 5'-GA-3' repeats were present a stop codon would occur 1 bp after the last 5'-GA-3' repeat. A 630-bp SalI-BsgI fragment within lob-2A was deleted, and a kanamycin resistance (Kmr) gene was inserted into this site to create pCAATΔlob2A. Following electroporation of pCAATΔlob2A into H. somnus 738, several allelic exchange mutants were isolated. The LOS electrophoretic profile of one mutant, strain 738-lob2A1::Km, was altered, and the phase variation rate was reduced but phase variation was not eliminated. A variant with 19 5'-GA-3' repeats in lob-2A had an LOS profile similar to that of 738-lob2A1::Km, suggesting that lob-2A was turned off in this phase. Nanoelectrospray mass spectrometry (nES-MS) and NMR spectroscopy showed that 738-lob2A1::Km was deficient in the terminalβGal(1-3)βGlcNAc residue present in parent strain 738. Mutant 738-lob2A1::Km was significantly more sensitive to the bactericidal action of normal bovine serum and was less virulent in mice than was parent strain 738. When H. somnus 129Pt was electrotransformed with shuttle vector pLS88 containing lob-2A, its LOS electrophoretic profile was modified and addnl. N-acetylhexosamine residues were present, as determined by nES-MS anal. These results indicated that lob-2A may be an N-acetylglucosamine transferase involved in LOS biosynthesis and phase variation and that LOS structure is important to H. somnus virulence.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:606623 CAPLUS

DOCUMENT NUMBER: 131:319539

TITLE: Molecular directionality of polysaccharide polymerization by the Pasteurella multocida hyaluronan synthase

AUTHOR(S): DeAngelis, Paul L.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, 73104, USA
SOURCE: Journal of Biological Chemistry (1999), 274(37), 26557-26562
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hyaluronan (HA), a long linear polymer composed of alternating glucuronic acid and N-acetylglucosamine residues, is an essential polysaccharide in vertebrates and a putative virulence factor in certain microbes. All known HA synthases utilize UDP-sugar precursors. Previous reports describing the HA synthase enzymes from Streptococcus bacteria and mammals, however, did not agree on the mol. directionality of polymer elongation. We show here that a HA synthase, PmHAS, from Gram-neg. P. multocida bacteria polymerizes the HA chain by the addition of sugar units to the nonreducing terminus. Recombinant PmHAS will elongate exogenous HA oligosaccharide acceptors to form long polymers in vitro; thus far no other HA synthase has displayed this capability. The directionality of synthesis was established definitively by testing the ability of PmHAS to elongate defined oligosaccharide derivs. Anal. of the initial stages of synthesis demonstrated that PmHAS added single monosaccharide units sequentially. Apparently the fidelity of the individual sugar transfer reactions is sufficient to generate the authentic repeating structure of HA. Therefore, simultaneous addition of disaccharide block units is not required as hypothesized in some recent models of polysaccharide biosynthesis. PmHAS appears distinct from other known HA synthases based on differences in sequence, topol. in the membrane, and putative reaction mechanism.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:404833 CAPLUS
DOCUMENT NUMBER: 125:52054
TITLE: Enzymological characterization of the Pasteurella multocida hyaluronic acid synthase
AUTHOR(S): DeAngelis, Paul L.
CORPORATE SOURCE: Health Science Center, University of Oklahoma, Oklahoma City, OK, 73190, USA
SOURCE: Biochemistry (1996), 35(30), 9768-9771
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Hyaluronic acid (HA), a linear polysaccharide composed of alternating glucuronic acid and N-acetylglucosamine residues, is an essential mol. of higher vertebrates. The fowl cholera pathogen Pasteurella multocida Carter Type A also produces HA in the form of an extracellular capsule to evade host defenses. HA synthase activity could be obtained from cell-free membrane prepns. of P. multocida. The enzyme utilized UDP-sugar precursors of HA in the presence of Mg2+ or Mn2+ at neutral pH. Mn2+ at 1 mM stimulated .apprx.2-fold more incorporation than Mg2+ at 10 mM. The analogous enzyme from group A Streptococcus, HasA, is stimulated more by Mg2+ than Mn2+. The apparent Michaelis consts., Km, of the P. multocida HA synthase for UDP-N-acetylglucosamine and UDP-glucuronic acid were estimated to be .apprx.75 and .apprx.20 μM, resp., in the presence of Mg2+, which suggests that the substrates are bound with 2-3-fold higher affinity than by the HasA enzyme. The rate enhancement observed with Mn2+ is apparently not due to better binding of the sugar nucleotide precursors complexed to

Mn ion because the Km value, a measure of substrate affinity, increases by 25-50% in comparison to Mg2+. In summary, the HA synthase from P. multocida, a Gram-neg. bacterium, has kinetic optima distinct from those of HasA, the analog from the Gram-pos. group A Streptococcus.

L3 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:128651 CAPLUS
DOCUMENT NUMBER: 124:173976
TITLE: Monosaccharides and myo-Inositol in Commercial Milks
AUTHOR(S): Troyano, Esperanza; Villamiel, Mar; Olano, Agustin; Sanz, Jesus; Martinez-Castro, Isabel
CORPORATE SOURCE: Instituto de Fermentaciones Industriales, Madrid, 28006, Spain
SOURCE: Journal of Agricultural and Food Chemistry (1996), 44(3), 815-17
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Monosaccharides (galactose, glucose, tagatose, 3-deoxypentulose, N -acetylglucosamine, and N-acetylgalactosamine) and myo-inositol were determined by gas chromatog. in different types of market milk (pasteurized, dried, UHT, and in-container sterilized). Glucose, myo-inositol, and N-acetylhexosamine concns. were similar to those previously found in raw milk and showed no variations due to sample type. Sterilized milk samples were characterized by the presence of tagatose and 3-deoxypentulose and, thus, could be clearly distinguished from UHT samples. The galactose level, which was found to be higher in the samples submitted to stronger thermal treatment, seems to be also a useful indicator for milk classification.

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:106382 CAPLUS
DOCUMENT NUMBER: 146:353453
TITLE: Quantitative continuous assay for hyaluronan synthase
AUTHOR(S): Krupa, Joanne C.; Shaya, David; Chi, Lianli; Linhardt, Robert J.; Cygler, Miroslaw; Withers, Stephen G.; Mort, John S.
CORPORATE SOURCE: Joint Diseases Laboratory, Shriners Hospital for Children, Montreal, QC, H3G 1A6, Can.
SOURCE: Analytical Biochemistry (2007), 361(2), 218-225
CODEN: ANBCA2; ISSN: 0003-2697
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A rapid, continuous, and convenient three-enzyme coupled UV absorption assay was developed to quantitate the glucuronic acid and N-acetylglucosamine transferase activities of hyaluronan synthase from Pasteurella multocida (PmHAS). Activity was measured by coupling the UDP produced from the PmHAS-catalyzed transfer of UDP-GlcNAc and UDP-GlcUA to a hyaluronic acid tetrasaccharide primer with the oxidation of NADH. Using a fluorescently labeled primer, the products were characterized by gel electrophoresis. Our results show that a truncated soluble form of recombinant PmHAS (residues 1-703) can catalyze the glycosyl transfers in a time- and concentration-dependent manner. The assay can be used to determine kinetic parameters, inhibition consts., and mechanistic aspects of this enzyme. In addition, it can be used to quantify PmHAS during purification of the enzyme from culture media.
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:183015 CAPLUS
DOCUMENT NUMBER: 144:406987
TITLE: Critical Elements of Oligosaccharide Acceptor Substrates for the Pasteurella multocida Hyaluronan Synthase
AUTHOR(S): Williams, Kellie J.; Halkes, Koen M.; Kamerling, Johannis P.; DeAngelis, Paul L.
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Oklahoma Center for Medical Glycobiology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, 73104, USA
SOURCE: Journal of Biological Chemistry (2006), 281(9), 5391-5397
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three-dimensional structures are not available for polysaccharide synthases and only minimal information on the mol. basis for catalysis is known. The Pasteurella multocida hyaluronan synthase (PmHAS) catalyzes the polymerization of the alternating β1,3- N-acetylglucosamine-β1,4-glucuronic acid sugar chain by the sequential addition of single monosaccharides to the non-reducing terminus. Therefore, PmHAS possesses both GlcNAc-transferase and glucuronic acid (GlcUA)-transferase activities. The recombinant Escherichia coli-derived PmHAS enzyme will elongate exogenously supplied hyaluronan chains in vitro with either a single monosaccharide or a long chain depending on the UDP-sugar availability. Competition studies using pairs of acceptors with distinct termini (where one oligosaccharide is a substrate that may be elongated, whereas the other cannot) were performed here; the lack of

competition suggests that PmHAS contains at least two distinct acceptor sites. The authors hypothesize that the size of the acceptor binding pockets of the enzyme corresponds to the size of the smallest high efficiency substrates; thus the authors tested the relative activity of a series of authentic hyaluronan oligosaccharides and related structural analogs. The GlcUA-transferase site readily elongates (GlcNAc-GlcUA)2, whereas the GlcNAc-transferase elongates GlcUA-Glc-NAc-GlcUA. The minimally sized oligosaccharides, elongated with high efficiency, both contain a trisaccharide with two glucuronic acid residues that enabled the identification of a synthetic, artificial acceptor for the synthase. PmHAS behaves as a fusion of two complete glycosyltransferases, each containing a donor site and an acceptor site, in one polypeptide. Overall, this information advances the knowledge of glycosaminoglycan biosynthesis as well as assists the creation of various therapeutic sugars for medical applications in the future.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:230126 CAPLUS
DOCUMENT NUMBER: 142:446265
TITLE: Chemical indicators of heat treatment in fortified and special milks
AUTHOR(S): Mendoza, Maite Rada; Olano, Agustin; Villamiel, Mar
CORPORATE SOURCE: Instituto de Fermentaciones Industriales (CSIC), Madrid, 28006, Spain
SOURCE: Journal of Agricultural and Food Chemistry (2005), 53(8), 2995-2999
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Carbohydrate and furosine contents in 12 com. fortified and special milk samples (pasteurized goat's and ewe's milks; ultrahigh-temperature (UHT) goat's milk, UHT milks fortified with calcium, magnesium, fiber, or royal jelly and honey; and lactose-hydrolyzed milks) were analyzed. Except for lactose-hydrolyzed milks, furosine, lactose, lactulose, galactose, glucose, N-acetylgalactosamine, N-acetylglucosamine, and myo-inositol contents were similar to the previously reported values for UHT or pasteurized milk samples. In lactose-hydrolyzed milks, lactulose was not detectable and lactose was present in low amount; high levels of glucose, galactose, fructose, tagatose, and furosine were also detected in this type of milk. Results found in com. milks were compared to those obtained in laboratory-prepared UHT milks with lactose hydrolyzed prior to heating. Hydrolysis of lactose before thermal treatments promoted elevated accumulation of reducing sugars (galactose and glucose) that could be partially converted to the corresponding isomers (tagatose and fructose) during heating. In addition, the reducing sugars could also react with the amino groups of proteins, giving rise to the corresponding Amadori compound According to the obtained results, heating prior to hydrolysis of lactose is suggested to avoid a considerable loss of available lysine.

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:825024 CAPLUS
DOCUMENT NUMBER: 141:309636
TITLE: Cloning and characterization gene pmHS1 or pmHS12-encoded Heparin/heparosan synthase from Pasteurella multocida and methods of using them for making heparin or heparosan polymer
INVENTOR(S): Deangelis, Paul L.
PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 58 pp., Cont.-in-part of U.S. Ser. No. 142,143.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 25
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004197868	A1	20041007	US 2004-814752	20040331
US 2003099967	A1	20030529	US 2002-142143	20020508
WO 2004089305	A2	20041021	WO 2004-US9742	20040331
WO 2004089305	A3	20060928		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2006105431	A1	20060518	US 2005-253453	20051019

PRIORITY APPLN. INFO.:

US 2001-289554P	P	20010508
US 2001-296386P	P	20010606
US 2001-303691P	P	20010706
US 2001-313258P	P	20010817
US 2002-142143	A2	20020508
US 2003-458939P	P	20030331
US 1998-107929P	P	19981111
US 1999-283402	B2	19990401
US 1999-437277	A1	19991110
US 2000-199538P	P	20000425
US 2001-842484	B1	20010425
US 2002-184485	B1	20020627
US 2004-814752	A2	20040331
US 2004-620162P	P	20041019
US 2005-42530	A2	20050124
US 2005-178560	A2	20050711

AB The presently claimed and disclosed invention relates, in general, to single action, dual action and soluble heparin synthases and, more particularly, to single action, dual action and soluble heparin synthases obtained from Pasteurella multocida. In particular, dual action heparin/heparosan synthase encoded by gene pmHS1 or pmHS2 in P. multocida are provided. This enzyme is responsible for the polymerization of the glucuronic acid and N-acetylglucosamine to form heparin and heparosan resp. The presently claimed and disclosed invention also relates to heparosan, heparin and heparin-like mols. provided by recombinant techniques and methods of using such mols. The presently claimed and disclosed invention also relates to methods, and mols. produced according to such methods, for using the presently claimed and disclosed heparosan and/or heparin synthase for polymer grafting and the production of non-naturally occurring chimeric polymers incorporating stretches of one or more acidic GAG mols., such as heparin, chondroitin, hyaluronan, and/or heparosan.

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:701972 CAPLUS
DOCUMENT NUMBER: 139:380052
TITLE: Rapid Chemoenzymatic Synthesis of Monodisperse Hyaluronan Oligosaccharides with Immobilized Enzyme

Reactors
AUTHOR(S): DeAngelis, Paul L.; Oatman, Leonard C.; Gay, Daniel F.
CORPORATE SOURCE: Oklahoma Center for Medical Glycobiology, Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, Oklahoma City, OK, 73104, USA
SOURCE: Journal of Biological Chemistry (2003), 278(37), 35199-35203
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We describe the chemoenzymic synthesis of a variety of monodisperse hyaluronan (β4-glucuronic acid-β3- N-acetylglucosamine (HA)) oligosaccharides. Potential medical applications for HA oligosaccharides (.apprx.10-20 sugars in length) include killing cancerous tumors and enhancing wound vascularization. Previously, the lack of defined oligosaccharides has limited the exploration of these sugars as components of new therapeutics. The Pasteurella multocida HA synthase, pmHAS, a polymerizing enzyme that normally elongates HA chains rapidly (.apprx.1-100 sugars/s), was converted by mutagenesis into two single-action glycosyltransferases (glucuronic acid transferase and N-acetylglucosamine transferase). The two resulting enzymes were purified and immobilized individually onto solid supports. The two types of enzyme reactors were used in an alternating fashion to produce extremely pure sugar polymers of a single length (up to HA20) in a controlled, stepwise fashion without purification of the intermediates. These mols. are the longest, non-block, monodisperse synthetic oligosaccharides hitherto reported. This technol. platform is also amenable to the synthesis of medicant-tagged or radioactive oligosaccharides for biomedical testing. Furthermore, these expts. with immobilized mutant enzymes prove both that pmHAS-catalyzed polymerization is non-processive and that a monomer of enzyme is the functional catalytic unit.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:376293 CAPLUS
DOCUMENT NUMBER: 138:380406
TITLE: Recombinant expression of bacterial hyaluronan synthase genes in Bacillus and hyaluronic acid production
INVENTOR(S): Deangelis, Paul L.; Weigel, Paul H.; Kumari, Kshama
PATENT ASSIGNEE(S): University of Oklahoma Board of Regents, USA
SOURCE: U.S. Pat. Appl. Publ., 79 pp., Cont.-in-part of U.S. Ser. No. 469,200.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 25
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003092118	A1	20030515	US 2002-172527	20020613
US 6951743	B2	20051004		
EP 1522579	A2	20050413	EP 2004-29227	19981030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
ES 2235378	T3	20050701	ES 1998-957450	19981030
US 6833264	B1	20041221	US 1999-469200	19991221
US 2002160489	A1	20021031	US 2001-879959	20010912

CA 2451443	A1	20030724	CA 2002-2451443	20020613
WO 2003060063	A2	20030724	WO 2002-US18915	20020613
WO 2003060063	A3	20040916		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002365206	A1	20030730	AU 2002-365206	20020613
EP 1481052	A2	20041201	EP 2002-804804	20020613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2005514059	T	20050519	JP 2003-560150	20020613
CN 1620511	A	20050525	CN 2002-813370	20020613
US 2003113845	A1	20030619	US 2002-217613	20020812
US 6987023	B2	20060117		
US 7091008	B1	20060815	US 2004-981632	20041105
US 2005287646	A1	20051229	US 2005-120422	20050502
US 7029880	B2	20060418		
US 2005266460	A1	20051201	US 2005-124215	20050509
US 7232684	B2	20070619		
US 2006263858	A1	20061123	US 2006-474663	20060626
US 7229796	B2	20070612		
US 2007166793	A1	20070719	US 2007-724374	20070315

PRIORITY APPLN. INFO.:	US 1997-64435P	P 19971031
	US 1998-178851	B1 19981026
	US 1999-469200	A2 19991221
	US 2001-297744P	P 20010613
	US 2001-297788P	P 20010613
	US 1994-270581	B1 19940701
	US 1997-899040	B2 19970723
	US 1998-80414P	P 19980402
	US 1998-146893	A2 19980903
	EP 1998-957450	A3 19981030
	US 1999-283402	B1 19990401
	US 2001-305285P	P 20010713
	US 2001-879959	A1 20010912
	US 2002-172527	A3 20020613
	WO 2002-US18915	W 20020613
	US 2002-217613	A1 20020812
	US 2004-981632	A1 20041105
	US 2006-474663	A1 20060626

AB The present invention relates to a recombinant Bacillus host cell containing a recombinant vector including a nucleic acid segment having a coding region segment encoding enzymically active hyaluronan synthase (HAS). The recombinant Bacillus host cell is utilized in methods for producing secreted hyaluronic acid (HA) that is further extracted and purified. The invention claims use of nucleic acid and protein sequences for HAS from Streptococcus uberis, Streptococcus pyogenes, and Pasteurella multocida. Methods for HA production include high-level expression of hyaluronan synthase from Bacillus-compatible promoters, use of mRNA stabilizing or destabilizing elements, and enhanced production of UDP-glucuronic acid and/or UDP-N-acetylglucosamine in the recombinant host cell through use of active UDP-sugar precursor biosynthetic enzyme genes. HA with mol. weight of .apprx.107 Daltons can be produced by recombinant expression of hyaluronan synthase.

REFERENCE COUNT: 126 THERE ARE 126 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:335294 CAPLUS
DOCUMENT NUMBER: 138:350482
TITLE: Preparation of β-1,3- N-acetylglucosamine transferase from Pasteurella multocida and the use of the enzyme for N-acetylglucosamine -containing polysaccharide synthesis
INVENTOR(S): Endo, Tetsuo; Koizumi, Satoshi
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003035877	A1	20030501	WO 2002-JP11111	20021025
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2465066	A1	20030501	CA 2002-2465066	20021025
AU 2002354369	A1	20030506	AU 2002-354369	20021025
EP 1447449	A1	20040818	EP 2002-788591	20021025
EP 1447449	B1	20061220		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
AT 348890	T	20070115	AT 2002-788591	20021025
US 2005003478	A1	20050106	US 2004-493493	20040422
PRIORITY APPLN. INFO.:			JP 2001-329288 A	20011026
			WO 2002-JP11111 W	20021025

AB This invention provides a process for producing a protein having a β-1,3- N-acetylglucosamine transferase activity with the use of a transformant containing a DNA encoding a protein having a β-1,3- N-acetylglucosamine transferase activity from Pasteurella multocida. The DNA and protein sequences of β-1,3-N-acetylglucosamin were provided. The enzyme provided in this invention can be used for producing N-acetylglucosamine -containing polysaccharides such as GlcNAcβ1, 3Galβ1 and 4Glc.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:59961 CAPLUS
DOCUMENT NUMBER: 138:84326
TITLE: Genetic organization of Pasteurella multocida cap Loci and development of a multiplex capsular PCR typing system. [Erratum to document cited in CA136:32387]
AUTHOR(S): Townsend, Kirsty M.; Boyce, John D.; Chung, Jing Y.; Frost, Alan J.; Adler, Ben
CORPORATE SOURCE: Veterinary Pathology and Anatomy, School of Veterinary Science and Animal Production, The University of Queensland, Brisbane, 4072, Australia
SOURCE: Journal of Clinical Microbiology (2001), 39(6), 2378

CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The corrected Figure 1 (panel E) on page 927 is given.

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:868692 CAPLUS
DOCUMENT NUMBER: 137:381685
TITLE: Cloning, characterization and sequences of PmHS and PglA heparin/heparosan synthases from Pasteurella multocida and use of the heparin/heparosan synthases for the production of polymers
INVENTOR(S): Deangelis, Paul L.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 128 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 25
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002089742	A2	20021114	WO 2002-US14581	20020508
WO 2002089742	A3	20031023		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002256501	A1	20021118	AU 2002-256501	20020508
EP 1392843	A2	20040303	EP 2002-725971	20020508
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:		
US 2001-289554P	P	20010508
US 2001-296386P	P	20010606
US 2001-303691P	P	20010706
US 2001-313258P	P	20010817
WO 2002-US14581	W	20020508

AB The presently claimed and disclosed invention relates, in general, to dual action heparin synthases and, more particularly, to dual action heparin synthases obtained from Pasteurella multocida. A dual action heparin/heparosan synthase encoded by a gene pmHS was identified in P. multocida. This enzyme is responsible for the polymerization of the glucuronic acid and N-acetylglucosamine. The nucleotide sequence of the P. multocida gene pmHS (clones A2 and B10) and the encoded amino acid sequence of the dual action heparin/heparosan synthase are disclosed. A gene with unknown function, called pglA was found in a genome sequencing project of type A P. multocida. It is disclosed in the present invention that the PglA enzyme is also a heparin synthase. This unexpected cryptic gene is functional in vitro in recombinant systems. The presently claimed and disclosed invention also relates to heparosan, heparin and heparin-like mols. provided by recombinant techniques and methods of using such mols. and also the identification or prediction of heparin synthases or component single action enzymes. The presently claimed and disclosed invention also relates to methods, and mols. produced according to such methods, for using the presently claimed and disclosed heparosan and/or heparin synthase for polymer grafting and the production of non-naturally

occurring chimeric polymers incorporating stretches of one or more acidic GAG mols., such as heparin, chondroitin, hyaluronan, and/or heparosan.

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1938:33629 CAPLUS
DOCUMENT NUMBER: 32:33629
ORIGINAL REFERENCE NO.: 32:4679f-i
TITLE: The preservation of fruit juices. I. The preparation and preservation of citrus-fruit squashes
AUTHOR(S): Singh, Lal; Lal, Girdhari
SOURCE: Indian Journal of Agricultural Sciences (1938), 8, 77-102
CODEN: IJASA3; ISSN: 0019-5022
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Lemon and Malta orange squashes were prepared by different methods with different concns. of sugar and were stored at room temp. for 1.25 yr. Squashes with high sugar content (65° Balling) retained their fresh-fruit character and stability to a marked degree. Addition of thoroughly ground and strained peel emulsion of 2-4% fruits used for juice extraction considerably improved the flavor and aroma of the bottled products, particularly those with high sugar content. Na benzoate, even in the purest form, imparted a peculiar chemical odor, resembling CHI3, and a burning taste to the product, whereas pasteurized squashes developed an unpleasant cooked flavor. SO2 imparted a slight sulfurous odor to the freshly prepared squash which was not noticeable in the diluted beverage, but this adverse effect disappeared in about 9 months' storage at room temp. Satisfactory preservation of squashes high in sugar was obtained with 100-200 p. p. m. SO2 supplied in the form of K metabisulfite. Spoilage did not occur in chemically preserved squashes that were occasionally opened and recorked in the laboratory over a period of 2 months. Adverse color changes occurred in squashes other than those preserved with SO2. Rate of settling of sediment was much slower in pasteurized than in chemically preserved squashes.

L11 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1938:33629 CAPLUS
DOCUMENT NUMBER: 32:33629
ORIGINAL REFERENCE NO.: 32:4679f-i
TITLE: The preservation of fruit juices. I. The preparation and preservation of citrus-fruit squashes
AUTHOR(S): Singh, Lal; Lal, Girdhari
SOURCE: Indian Journal of Agricultural Sciences (1938), 8, 77-102
CODEN: IJASA3; ISSN: 0019-5022
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Lemon and Malta orange squashes were prepared by different methods with different concns. of sugar and were stored at room temp. for 1.25 yr. Squashes with high sugar content (65° Balling) retained their fresh-fruit character and stability to a marked degree. Addition of thoroughly ground and strained peel emulsion of 2-4% fruits used for juice extraction considerably improved the flavor and aroma of the bottled products, particularly those with high sugar content. Na benzoate, even in the purest form, imparted a peculiar chemical odor, resembling CHI3, and a burning taste to the product, whereas pasteurized squashes developed an unpleasant cooked flavor. SO2 imparted a slight sulfurous odor to the freshly prepared squash which was not noticeable in the diluted beverage, but this adverse effect disappeared in about 9 months' storage at room temp. Satisfactory preservation of squashes high in sugar was obtained with 100-200 p. p. m. SO2 supplied in the form of K metabisulfite. Spoilage did not occur in chemically preserved squashes that were occasionally opened and recorked in the laboratory over a period of 2 months. Adverse color changes occurred in squashes other than those preserved with SO2. Rate of settling of sediment was much slower in pasteurized than in chemically preserved squashes.

L11 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1936:54599 CAPLUS
DOCUMENT NUMBER: 30:54599
ORIGINAL REFERENCE NO.: 30:7275f-i
TITLE: Process of aging or maturing wines
AUTHOR(S): Joslyn, M. A.
SOURCE: Food Industries (1936), 8, 444-5,449
CODEN: FOINAU; ISSN: 0096-2236
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C. A. 29, 8222.2. The essential changes in wine during aging are: increase in ester content, slight increase in AcH and acetal contents; decrease in tannin, coloring matter and total acidity; slight increase in volatile acid content; and lightening in color of red wines and slight yellowing of white wines. The slow oxidation of wine and low rate of esterification under ordinary storage conditions result in slow natural aging. Oak barrels are best for aging wines. The optimum temp. is 15-16°. A constant storage temp. is important, especially for bottled wines stoppered with corks. The prompt remove of yeasts and other sediments from freshly fermented wines is useful in avoiding the liberation of undesirable constituents such as enzymes and cysteine. Argols are removed by refrigeration which accelerates precipitation Pasteurization in continuous-flash pasteurizers at 85° coagulates certain colloids and aids the blending in fortified wines. Sauterne-type wines are heated in oak barrels at 60° for several months to develop the flavor. The process consists of a combination of caramelization and oxidation to develop the so-called "rancio" or AcH flavor of the wine. All of the present quick aging processes are defective in that they merely increase the rate of the oxidative changes and do not materially increase the rate of the esterifcation processes which give the beverage its delicate

bouquet and aroma. Too much stress has been placed on oxidation. The chemistry of the aging of wine is still very imperfectly understood.

L13 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:842983 CAPLUS
TITLE: Evaluation of the stability of mixed beverage elaborated with coconut water and passion fruit juice
AUTHOR(S): Gomes da Silva, Fernanda Vanessa; Maia, Geraldo Arraes; Machado de Sousa, Paulo Henrique; Lima, Andrea da Silva; Correia da Costa, Jose Maria; Teixeira de Figueiredo, Evania Altina
CORPORATE SOURCE: Departamento de Tecnologia de Alimentos, Universidade Federal do Ceara, Ceara, 60356-000, Brazil
SOURCE: Acta Scientiarum, Technology (2006), 28(2), 191-197
CODEN: ASTCFU; ISSN: 1806-2563
PUBLISHER: Universidade Estadual de Maringa
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
AB The objective of this work was to study the stability of a beverage formulated from passion fruit juice and coconut water, throughout 180 days of storage at room temp. The beverage was prepared blending 20% passion fruit juice and 80% coconut water and sugar up to 13 °Brix, heat processed at 90°C for 60s and packed in cleaned pasteurized bottles. Physicochem., microbiol. and sensory analyses of the beverage were performed initially (time zero) and during six months of storage at room temp. (about 25°C) in triplicate. The beverage presented good stability regarding pH, soluble solids, acidity and color. Vitamin C and sugar contents changed significantly throughout storage time. The products were microbiol. safe during storage. The product presented good sensory acceptance, which suggests its potential for market.

L13 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:492826 CAPLUS
TITLE: An improved process for the preparation of litchi(litchi chinensis)beverage
INVENTOR(S): Chauhan, Attar Singh; Rekha, Mysore Narayan; Negi, Pradeep Singh; Ramteke, Ramesh Shyam; Eipeson, Waliaveetil Eipe
PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India
SOURCE: Indian Pat. Appl.
CODEN: INXXBQ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 2003DE00432	A	20070427	IN 2003-DE432	20030326
PRIORITY APPLN. INFO.:			IN 2003-DE432	20030326

AB Litchi (Litchi chinensis) is one of the excellent fruits of the Indian SUB continent. The fruit has an outer rough skin and inner translucent edible portion, commonly known as fleshy arils. The fleshy arils of litchi is quite delicate having an aromatic sweet taste but slightly acidic. For preparing litchi beverage there is always a problem of browning during storage at tropical ambient temperature. Generally, the beverage becomes brown within a few months of storage due to the reaction of reducing sugars and amino acids resulting in the formation of complex compounds. In our invention, it has been observed that freezing of litchi fruits before peeling would be helpful to prevent non - enzymatic browning on storage at tropical ambient temperature. The process comprises of washing, packaging of fresh litchi fruits in LDPE bags without peeling and freezing. The frozen litchi fruits are lye peeled with hot lye solution and then neutralized by

dipping in some acidulants which may be lime juice, citric acid, amla juice, tartaric acid or combination of them. Neutralized litchi fruits are then subjected for deseeding and pulping. The juice is extracted from the litchi pulp and mixed with sugar syrup containing citric acid to get the litchi beverage. The said beverage may be pasteurized at 85$$char$$°C and hot filled in pre sterilized glass bottles. After, sealing with crown cork the litchi beverage may be stored at tropical ambient temperature with or without the addition of preservatives. The litchi beverage prepared by this process can be stored up to one year without any browning, discolouration or microbial spoilage. The stored litchi beverage has excellent colour, flavour, taste and overall quality.

L13 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:669445 CAPLUS
DOCUMENT NUMBER: 119:269445
TITLE: Preparation and properties of guava milk beverages
AUTHOR(S): Ibrahim, M. K. E.; El-Abd, M. M.; Mehriz, A. M.; Ramadan, F. A. M.
CORPORATE SOURCE: Fac. Agric., Cairo Univ., Egypt
SOURCE: Egyptian Journal of Dairy Science (1993), 21(1), 59-68
CODEN: EJDSDB; ISSN: 0378-2700
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The use of 10% guava pulp and 4% sugar in processing of pasteurized guava milk beverage gave the most acceptable flavor and sweetness. The addition of stabilizer was necessary for the production of sterilized guava milk beverage. The use of 0.05% carrageenan was preferred to sodium CM-cellulose of the same concentration
Anal.
of the sterilized guava milk beverage stored at room temp. for 90 days indicated that nonprotein nitrogen (NPN) and reducing sugar contents increased upon storage, whereas no changes were observed in both total solids and ash contents. The NPN content of guava milk beverages containing stabilizers was lower than that of unsupplemented control beverages. The pH of sterilized beverage slightly decreased upon storage, while the viscosity increased.

L13 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:20050 CAPLUS
DOCUMENT NUMBER: 116:20050
TITLE: A calcium enriched fermented milk beverage
INVENTOR(S): Siemensma, Andre; Van der Leij, Jan; Glas, Cornelis
PATENT ASSIGNEE(S): Cooperatieve Condensfabriek "Friesland", Neth.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 449354	A1	19911002	EP 1991-200575		19910315
EP 449354	B1	19940216			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE					
NL 9000613	A	19911016	NL 1990-613		19900316
AT 101489	T	19940315	AT 1991-200575		19910315
PRIORITY APPLN. INFO.:			NL 1990-613	A	19900316
			EP 1991-200575	A	19910315

AB A Ca-enriched fermented milk beverage that is physicochem.
stable is prepared Low-fat milk with an increased content of non-fat milk

solids (i.e., 15-30%) is fermented with a culture of lactic acid bacteria until pH 3.8-4.2. The resulting yogurt is homogenized and mixed with an aqueous solution of sugars, a Ca salt, a Mg salt, a stabilizer, and citric acid or citric acid salts such that the protein content of the solids is ≤20%, the Ca-P ratio is ≥1.7, and the Mg-Ca ratio is 1:(4-12). The mixture is then homogenized at room temp. and pasteurized.

L13 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1981:495782 CAPLUS
DOCUMENT NUMBER: 95:95782
TITLE: Protein product and compositions containing such products
INVENTOR(S): Chang, Pei Kung; Lee, Chang Rae
PATENT ASSIGNEE(S): Stauffer Chemical Co. , USA
SOURCE: Eur. Pat. Appl., 49 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 29370	A1	19810527	EP 1980-304120	19801118
R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
US 4675201	A	19870623	US 1980-187352	19800924
CA 1193899	A1	19850924	CA 1980-364424	19801112
JP 56099752	A	19810811	JP 1980-160098	19801113
ZA 8007022	A	19811028	ZA 1980-7022	19801113
NO 8003466	A	19810520	NO 1980-3466	19801118
AU 8064477	A	19810528	AU 1980-64477	19801118
HU 29735	A2	19840228	HU 1980-2756	19801118
PRIORITY APPLN. INFO.:			US 1979-95684 A	19791119
			US 1980-187352 A	19800924

AB Whey and other proteins are treated to decrease the gelation temp . at a pH above the isoelec. point to a temp. similar to that of egg white and to increase the solubility and stability in solns. at pH values below the isoelec. point. The soluble proteins from oilseed protein isolate preparation, soluble meat and fish proteins, blood albumins, and mixts. of proteins can also be processed for use in beverages or as egg white replacers. A whey protein concentrate containing 50-54% protein and prepared by ultrafiltration of acid whey was adjusted to 12% solids and pH 9.5 at room temp. The solution was heated to 60° over 15 min, and cooled to 25° over 15 min with stirring. The pH was brought to 7.0, and the product was freeze-dried. The gel strength of the product and dried egg white solns. (18% solids and 9 and 14.4% protein, resp.) was 210 and 220 g, resp., at 70° and 75 and 80 g, resp. at 65°. Control whey protein did not gel at 65° and gave a pourable gel at 70°. A pH 3.5 solution containing 1.3% protein and 10.04% sugar was bottled and pasteurized at 75° for 20 min, and showed little or no precipitation on storage in a refrigerator for 2 wk.

L13 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:433911 CAPLUS
DOCUMENT NUMBER: 73:33911
TITLE: Manufacture of bantu beer
INVENTOR(S): Soetens, Antoon
PATENT ASSIGNEE(S): Glenmor Products Ltd.
SOURCE: S. African, 6 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6808149		19691127	ZA	19681211

AB Bantu beer is an alc. beverage during the production of which lactic acid is formed by a bacterial souring step. The beer is brewed by the action of yeast. The product is stored in an agitated tank where the solids (0.6% by weight) are kept in suspension by slow stirring. The beer is filtered in a clarifying centrifuge followed by a 2nd-stage polishing filter. Sweetening (sugar, sugar sirup, or molasses) and (or) flavoring agents are added. The beer is cooled in a plate and frame or shell and tube type cooler to between -1° and 10°, then saturated with CO2 by direct injection into the liquid and then stored under pressure at ambient temp. The gas-charged product may be filled into bottles, cans, or other suitable containers; after crowning the product is pasteurized.

L13 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:842983 CAPLUS
TITLE: Evaluation of the stability of mixed beverage elaborated with coconut water and passion fruit juice
AUTHOR(S): Gomes da Silva, Fernanda Vanessa; Maia, Geraldo Arraes; Machado de Sousa, Paulo Henrique; Lima, Andrea da Silva; Correia da Costa, Jose Maria; Teixeira de Figueiredo, Evania Altina
CORPORATE SOURCE: Departamento de Tecnologia de Alimentos, Universidade Federal do Ceara, Ceara, 60356-000, Brazil
SOURCE: Acta Scientiarum, Technology (2006), 28(2), 191-197
CODEN: ASTCFU; ISSN: 1806-2563
PUBLISHER: Universidade Estadual de Maringa
DOCUMENT TYPE: Journal
LANGUAGE: Portuguese
AB The objective of this work was to study the stability of a beverage formulated from passion fruit juice and coconut water, throughout 180 days of storage at room temp. The beverage was prepared blending 20% passion fruit juice and 80% coconut water and sugar up to 13 °Brix, heat processed at 90°C for 60s and packed in cleaned pasteurized bottles. Physicochem., microbiol. and sensory analyses of the beverage were performed initially (time zero) and during six months of storage at room temp. (about 25°C) in triplicate. The beverage presented good stability regarding pH, soluble solids, acidity and color. Vitamin C and sugar contents changed significantly throughout storage time. The products were microbiol. safe during storage. The product presented good sensory acceptance, which suggests its potential for market.

L13 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:492826 CAPLUS
TITLE: An improved process for the preparation of litchi(litchi chinensis)beverage
INVENTOR(S): Chauhan, Attar Singh; Rekha, Mysore Narayan; Negi, Pradeep Singh; Ramteke, Ramesh Shyam; Eipeson, Waliaveetil Eipe
PATENT ASSIGNEE(S): Council of Scientific and Industrial Research, India
SOURCE: Indian Pat. Appl.
CODEN: INXXBQ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 2003DE00432	A	20070427	IN 2003-DE432	20030326
PRIORITY APPLN. INFO.:			IN 2003-DE432	20030326

AB Litchi (Litchi chinensis) is one of the excellent fruits of the Indian SUB continent. The fruit has an outer rough skin and inner translucent edible portion, commonly known as fleshy arils. The fleshy arils of litchi is quite delicate having an aromatic sweet taste but slightly acidic. For preparing litchi beverage there is always a problem of browning during storage at tropical ambient temperature. Generally, the beverage becomes brown within a few months of storage due to the reaction of reducing sugars and amino acids resulting in the formation of complex compounds. In our invention, it has been observed that freezing of litchi fruits before peeling would be helpful to prevent non - enzymatic browning on storage at tropical ambient temperature. The process comprises of washing, packaging of fresh litchi fruits in LDPE bags without peeling and freezing. The frozen litchi fruits are lye peeled with hot lye solution and then neutralized by

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L13 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:669445 CAPLUS
DOCUMENT NUMBER: 119:269445
TITLE: Preparation and properties of guava milk beverages
AUTHOR(S): Ibrahim, M. K. E.; El-Abd, M. M.; Mehriz, A. M.; Ramadan, F. A. M.
CORPORATE SOURCE: Fac. Agric., Cairo Univ., Egypt
SOURCE: Egyptian Journal of Dairy Science (1993), 21(1), 59-68
CODEN: EJDSDB; ISSN: 0378-2700
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The use of 10% guava pulp and 4% sugar in processing of pasteurized guava milk beverage gave the most acceptable flavor and sweetness. The addition of stabilizer was necessary for the production of sterilized guava milk beverage. The use of 0.05% carrageenan was preferred to sodium CM-cellulose of the same concentration Anal. of the sterilized guava milk beverage stored at room temp. for 90 days indicated that nonprotein nitrogen (NPN) and reducing sugar contents increased upon storage, whereas no changes were observed in both total solids and ash contents. The NPN content of guava milk beverages containing stabilizers was lower than that of unsupplemented control beverages. The pH of sterilized beverage slightly decreased upon storage, while the viscosity increased.

L13 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:20050 CAPLUS
DOCUMENT NUMBER: 116:20050
TITLE: A calcium enriched fermented milk beverage
INVENTOR(S): Siemensma, Andre; Van der Leij, Jan; Glas, Cornelis
PATENT ASSIGNEE(S): Cooperatieve Condensfabriek "Friesland", Neth.
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 449354	A1	19911002	EP 1991-200575	19910315
EP 449354	B1	19940216		
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AT 101489	T	19940315	AT 1991-200575	19910315
PRIORITY APPLN. INFO.:			NL 1990-613 A	19900316
			EP 1991-200575 A	19910315

AB A Ca-enriched fermented milk beverage that is physicochem. stable is prepared Low-fat milk with an increased content of non-fat milk

solids (i.e., 15-30%) is fermented with a culture of lactic acid bacteria until pH 3.8-4.2. The resulting yogurt is homogenized and mixed with an aqueous solution of sugars, a Ca salt, a Mg salt, a stabilizer, and citric acid or citric acid salts such that the protein content of the solids is ≤20%, the Ca-P ratio is ≥1.7, and the Mg-Ca ratio is 1:(4-12). The mixture is then homogenized at room temp. and pasteurized.

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PATENT INFORMATION:

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NO 8003466	A	19810520	NO 1980-3466	19801118
AU 8064477	A	19810528	AU 1980-64477	19801118
HU 29735	A2	19840228	HU 1980-2756	19801118
PRIORITY APPLN. INFO.:			US 1979-95684 A	19791119
			US 1980-187352 A	19800924

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L13 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:433911 CAPLUS
DOCUMENT NUMBER: 73:33911
TITLE: Manufacture of bantu beer
INVENTOR(S): Soetens, Antoon
PATENT ASSIGNEE(S): Glenmor Products Ltd.
SOURCE: S. African, 6 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6808149		19691127	ZA	19681211

AB Bantu beer is an alc. beverage during the production of which lactic acid is formed by a bacterial souring step. The beer is brewed by the action of yeast. The product is stored in an agitated tank where the solids (0.6% by weight) are kept in suspension by slow stirring. The beer is filtered in a clarifying centrifuge followed by a 2nd-stage polishing filter. Sweetening (sugar, sugar sirup, or molasses) and (or) flavoring agents are added. The beer is cooled in a plate and frame or shell and tube type cooler to between -1° and 10°, then saturated with CO2 by direct injection into the liquid and then stored under pressure at ambient temp. The gas-charged product may be filled into bottles, cans, or other suitable containers; after crowning the product is pasteurized.

L19 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1221724 CAPLUS
DOCUMENT NUMBER: 143:458702
TITLE: Fuel and by-products from fermentation still bottoms
INVENTOR(S): Peyton, Thomas O.; Ahring, Birgitte Kiaer; Rohold, Lars Erik
PATENT ASSIGNEE(S): Den.
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005252858	A1	20051117	US 2005-127670	20050512
WO 2005113118	A2	20051201	WO 2005-US16735	20050512
WO 2005113118	A3	20060824		
WO 2005113118	B1	20061026		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, US				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1748835	A2	20070207	EP 2005-748383	20050512
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				

PRIORITY APPLN. INFO.: US 2004-570935P P 20040513
WO 2005-US16735 W 20050512

AB The disclosed invention is an improved method for treating EtOH distillery discharge by recovering, through pressurized membrane filtration, pure water from still bottoms for human consumption and concentrating the solids before anaerobic fermentation The invention is an improved process because it retains the heat to operate at high temps. and recovers the water from the fermentation still bottoms while pasteurized in a sanitary manner and simultaneously concs. the solids for digestion in a completely stirred tank reactor at thermophilic temps. The reactor produces a gas rich in CH4 fuel to power the pressurized filtration process, produces a reduced volume of reactor waste to manage, and an aqueous NH3 solution to recycle to the process. This invention improves environmental quality, conserves energy, and produces a beverage of reliable source and quality.

L19 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1916:6341 CAPLUS
DOCUMENT NUMBER: 10:6341
ORIGINAL REFERENCE NO.: 10:1228g-i,1229a-b
TITLE: The utilization of waste oranges
AUTHOR(S): Cruess, W. V.
SOURCE: Calif. Agr. Expt. Sta. Bull. (1914), 244, 157-79
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB In Calif. from 5 to 20% of the orange crop is rejected owing to slight defects in shape, color or size, or to slight injury to the skin. These

waste fruits are used in the manufacture of marmalade, candied peel, bottled pulps and sirups, various liquids and beverages and chemical prepns., such as exts., oils and citrates. Examination of these products showed that those prepared by chemical or mechan. means were generally of good quality, while those involving some fermentation process were generally bad. The preparation of orange juice, orange wine and orange vinegar were investigated in the Zymological Laboratory of the University of Calif. Orange juice:

It is recommended that the freshly expressed juice be allowed to defecate until it becomes fairly clear. To prevent fermentation during this period and to check the development of a bitter flavor, a moderate amount of $K_2S_2O_5$ should be added to the juice, immediately after crushing. The defecated juice should be filtered, bottled immediately and pasteurized, or pasteurized in barrels and kept until it is desired to bottle it. Sterilization should take place at 180° to 185°F., at which temp. the flavor is not appreciably affected. Orange vinegar: The fresh juice should be treated with 4 to 6 oz. of $K_2S_2O_5$ per 100 gal. of juice (= 0.025%) and the juice allowed to stand for 24 hrs. or more, after which it is drawn off and fermented with pure yeast. Immediately after fermentation it is drawn off from the yeast and stored in well-filled closed barrels or tanks. until it is convenient to turn the juice into vinegar. One-fourth of its volume of strong vinegar is then added to prevent the growth of wine flowers and promote vinegar fermentation, which should take place in containers allowing a good exposure to the air. Orange wine: The fresh juice is defecated with $K_2S_2O_5$, to prevent fermentation for a short time. The clear juice is then fermented with pure yeast and filtered. The wine may be kept in well-filled bottles without pasteurization.

L23 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:259123 CAPLUS
DOCUMENT NUMBER: 145:355256
TITLE: Production and contamination of pasteurized beverages packed in sealed plastic containers in Thailand and potential preventive measures
AUTHOR(S): Chavasit, Visith; Kunhawattana, Supaporn; Jirarattanarangsri, Wachira
CORPORATE SOURCE: Institute of Nutrition, Mahidol University at Salaya, Nakhon Pathom, 73170, Thailand
SOURCE: Food Control (2006), 17(8), 622-630
CODEN: FOOCEV; ISSN: 0956-7135
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB From 35 premises that were sampled in this study, 86%, 69%, 59%, and 13% of pasteurized beverages packed in sealed plastic containers were contaminated with yeast, mold, coliform, or E. coli, resp. The products could be divided into two groups, i.e., heat sensitive and non-heat sensitive. At least 45% of the premises did not pass the Thai Food and Drug Administration (FDA) requirements for GMP. Chlorine treatment and temp. control were needed for heat sensitive products. Appropriate equipment and methods for double boiling, cooling, washing containers, and sanitizing utensils were developed. The developed systems were found to be feasible in four tested premises.
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1237126 CAPLUS
DOCUMENT NUMBER: 144:211435
TITLE: Processing and stability evaluation of isotonic beverages in plastic bottles
AUTHOR(S): Petrus, Rodrigo Rodrigues; Faria, Jose de Assis Fonseca
CORPORATE SOURCE: Departamento de Engenharia de Alimentos/Faculdade de Zootecnia e Engenharia de Alimentos, USP, Brazil
SOURCE: Ciencia e Tecnologia de Alimentos (Campinas, Brazil) (2005), 25(3), 518-524
CODEN: CTALDN; ISSN: 0101-2061
PUBLISHER: Sociedade Brasileira de Ciencia e Tecnologia de Alimentos
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: Portuguese
AB The preparation of isotonic beverage by using pasteurization and aseptic packaging in polyethylene terephthalate (PET) bottles stable at room temp. without chemical preservatives was studied. The plastic bottles were sanitized by mixture of 0.3% peracetic acid and 0.46% hydrogen peroxide sprayed for 5 s at 30°C. The formulated isotonic beverage with pH 3.40 and 0, 50 or 100 mg potassium sorbate/L was thermally processed in plate pasteurizer at 85°C/5 s and bottled. The beverage stability during storage at 25°C for 26 wk was evaluated by measuring pH, soluble solids, titratable acidity, ascorbic acid, microbial counts (total mesophilic aerobic bacteria , molds, yeasts), and sensory properties. There was no difference in pH, soluble solids and acidity of the processed beverages during the 26-wk storage, except that ascorbic acid levels decreased to .apprx.30% of the initial value. At 26 wk the total counts of mesophilic aerobic bacteria and of molds and yeasts were ≤5.7 and <10 CFU/mL, resp. There were no sensory changes during the storage. Thus, the formulated isotonic beverage can be processed at the above conditions without chemical preservatives and stored at room temp. for at least 6 mo in good com. quality.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 3 OF 4 CAPLUS. COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1043018 CAPLUS
DOCUMENT NUMBER: 144:190990
TITLE: Production of non-fermented milk containing Lactobacillus acidophilus UFV H2b20 isolated in Brazil
AUTHOR(S): Mendes de Figueiredo, Hamilton; Passos, Frederico Jose Vieira; Alencar de Moraes, Celia; Passos, Flavia Maria Lopes; Teixeira, Magdala Alencar
CORPORATE SOURCE: Departamento de Tecnologia, Universidade Estadual de Felra de Santana Coleglado de Engenharia de Allmentos Campus Universitario, Felra de Santana, CEP: 44031460, Brazil
SOURCE: Brazilian Journal of Food Technology (2004), 7(2), 139-144
CODEN: BJFTFR; ISSN: 1516-7275
URL: http://www2.ital.sp.gov.br/brazilianjournal/free/p04169.pdf
PUBLISHER: Instituto de Tecnologia de Alimentos
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: Portuguese
AB The production of non-fermented milk with added Lactobacillus acidophilus UFV H2b20 isolated in Brazil was studied. L. acidophilus was added at 105, 106, and 108 CFU/mL sterilized milk and the resulting non-fermented milk beverages were stored at 6, 8, 10, and 12°C fo 14 days. Microbial plate counts were determined every 2 days to verify cell viability. The milk pH and levels of lactic and acetic acids and galactose were determined by HPLC. The best bacterial cell inoculum was 106 CFU/mL which allowed milk storage at temps. up to 10°C for 12 days without substantial drop in pH; the min. limit of pH 6.5 was set for milk to be considered as normal. During this period the viable cell counts remained almost unaffected. Storage at 12°C decreased the viable cell counts and increased lactic acid production; the milk pH remained above 6.5 only for 10 days. Milk inoculation with 108 CFU/mL led to rapid production of lactic acid at low temps. (6°C), thus making the milk not suitable for human consumption from the second day of refrigerated storage. Thus, the com. production of non-fermented milk with 106 CFU/mL is feasible. The product shelf-life would be similar to that of normal pasteurized milk and with no substantial decrease in pH or viable cell counts.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:531862 CAPLUS
DOCUMENT NUMBER: 139:307024
TITLE: Chitosan-containing acidified milk beverage
INVENTOR(S): Alieva, L. R.; Evdokimov, I. A.; Vasilisin, S. V.; Vorotnikova, T. S.; Bastrykina, N. A.; Anaiko, N. S.
PATENT ASSIGNEE(S): Severo-Kavkazskii Gosudarstvennyi Tekhnicheskii Universitet, Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2206216	C2	20030620	RU 2001-122820	20010814
PRIORITY APPLN. INFO.:			RU 2001-122820	20010814

AB An acidified milk beverage is obtained by adding 1-3% chitosan (colloidal solution in whey) and 5-10% acidophilic bacteria (e.g., Lactobacillus acidophilus) to milk (standardized for concentration, pasteurized, and homogenized) at 35-42°. The temp . of the milk is maintained at 35-42° for 3-4 h with subsequent cooling to 4-8° and maintenance at this cool temp. for 2 h. The acidified milk beverage is characterized by favorable biol. and structural and mech. properties, with prolonged shelf life and reduced production costs.

L28 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:534084 CAPLUS
DOCUMENT NUMBER: 115:134084
TITLE: Chemical changes during storage of an alcoholic orange juice beverage
AUTHOR(S): Rodriguez, M.; Sadler, G. D.; Sims, C. A.; Braddock, R. J.
CORPORATE SOURCE: Citrus Res. Educ. Cent., Univ. Florida, Lake Alfred, FL, 33850, USA
SOURCE: Journal of Food Science (1991), 56(2), 475-9, 493
CODEN: JFDSAZ; ISSN: 0022-1147
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chemical stability of a pasteurized, noncarbonated, alc. orange juice beverage, (8% ethanol and 30% reconstituted Valencia frozen concentrated orange juice), was investigated. It was hot-filled into clear glass bottles under nitrogen and subjected to 14-wk storage at 4, 25, and 40.degree.. PH, .degree.Brix, titratable acidity, and % alc. remained constant throughout storage. Accumulation of furfural and darkening paralleled ascorbic acid degrdn. The beverage exhibited 25 times more browning at 40.degree. and 9 times more at 25.degree. than at 4.degree. after 14-wk. d-Limonene decreased at all temps. Nitrogen headspace slightly improved stability at 40.degree.. Time and temp. were most significant in storage and long-term shelf-life could only be achieved with refrigeration.

L28 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:50123 CAPLUS
DOCUMENT NUMBER: 104:50123
TITLE: Aseptic addition of Aspartame to pasteurized drinks and juices
INVENTOR(S): Kryger, Allen Charles
PATENT ASSIGNEE(S): Squirt and Co., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8504079	A1	19850926	WO 1985-US310	19850222
W: AU, BR, DK, FI, JP, KR, MC, NO				
RW: AT, BE, CH, DE, FR, GB, LU, NL, SE				
US 4547384	A	19851015	US 1984-588387	19840312
AU 8540621	A	19851011	AU 1985-40621	19850222
EP 185018	A1	19860625	EP 1985-901275	19850222
R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE				
JP 61501956	T	19860911	JP 1985-500997	19850222
FI 8504161	A	19851024	FI 1985-4161	19851024
DK 8505034	A	19851101	DK 1985-5034	19851101
NO 8504478	A	19851111	NO 1985-4478	19851111
PRIORITY APPLN. INFO.:			US 1984-588387 A	19840312
			WO 1985-US310 A	19850222

AB An aseptic sweetener solution containing Aspartame for addition to a pasteurized beverage is prepared by dissolving the sweetener in H2O at room temp. and adding malic acid and(or) citric acid, giving an aseptic sweetener solution Thus, 33 g of Aspartame was dissolved in 100 mL of H2O with citric acid (47.55 g) at 28.4. degree..

L28 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1983:87916 CAPLUS
DOCUMENT NUMBER: 98:87916
TITLE: Effects of calcium addition on stability and sensory properties of soy beverage
AUTHOR(S): Weingartner, Karl E.; Nelson, Alvin I.; Erdman, John W., Jr.
CORPORATE SOURCE: Dep. Food Sci., Univ. Illinois, Urbana, IL, 61801, USA
SOURCE: Journal of Food Science (1983), 48(1), 256-7, 263
CODEN: JFDSAZ; ISSN: 0022-1147
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pasteurized or thermally processed soybean beverages (6% soybean solids) were fortified to a level comparable with that of cow milk with 25 mM (or 30 mM) Ca using mixts. of Ca citrate and tricalcium phosphate. These fortified pasteurized products had acceptable sensory properties. Addition of these Ca salts did not adversely affect the protein stability of the beverage. Ca citrate [7693-13-2] Addition caused a decrease in beverage pH and viscosity. Thermally processed (still retort and agitort) canned beverages containing Ca salts were stable for 6 mo when stored at 4.degree. or at room temp.

L28 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:137907 CAPLUS
DOCUMENT NUMBER: 82:137907
TITLE: Food additives. Acrylonitrile/styrene copolymer
AUTHOR(S): Anon.
CORPORATE SOURCE: Food Drug Adm., Washington, DC, USA
SOURCE: Federal Register (1975), 40(30), 6489-90, 12 Feb 1975
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The title copolymer is produced by polymerization of 66-72 parts of acrylonitrile (I) and 28-34 parts of styrene. It may contain adjuvants, except mercaptans or other substances which form reversible complexes with I. It may be used under the Federal Food, Drug, and Cosmetic Act as a component of packaging materials intended to hold nonalc. beverages, hot filled or pasteurized at >150.degree. and at lower temps. It must meet the following specifications: N, 17.4-19.0; min. number average mol. weight, 30,000; residual I, 80 ppm; total nonvolatile extractives from H2O and 3% HOAc for 10 days at 150.degree.F, 0.01 mg/in2 surface area; and extracted copolymer, 0.001 under same conditions.

L28 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1971:528508 CAPLUS
DOCUMENT NUMBER: 75:128508
TITLE: Chillproofing of beverages using insoluble polymer-enzyme products
INVENTOR(S): Wildi, Bernard S.; Boyce, David C.
PATENT ASSIGNEE(S): Monsanto Co.
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3597219	A	19710803	US 1968-763352	19680927
PRIORITY APPLN. INFO.:			US 1968-763352	19680927

AB Malt beverages were chillproofed by treating with an insol. polymer-enzyme chillproofing agent and removing the agent to give beverages with improved stability, clarity and taste. For example, a clear solution of 0..5 g crystalline papain suspended in 55 ml 0.05M acetate buffer was added to 2.5 g ethylene-maleic anhydride copolymer in 250 ml 0.1M phosphate buffer, crosslinked, and washed to give 3.2 g polymerenzyme agent. To 100 barrels of a wort containing 60% malt and 40% corn grits at 47.degree.F and fermented 24 hr with brewers' yeast, 75.7 g of the above polymer-enzyme was added and allowed to ferment an addnl. 96 hr. The beer containing the chillproofing agent suspended as a gel was decanted from the yeast and stored 7 days at 3.degree., the chillproofing agent filtered, and the beer carbonated, stored an addnl. 4-5 days at low temp., filtered, pasteurized, and bottled to give beer with increased clarity, stability, and improved taste compared to beer prepared in conventional manner.

L28 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1958:116801 CAPLUS
DOCUMENT NUMBER: 52:116801
ORIGINAL REFERENCE NO.: 52:20729f-h
TITLE: The manufacture, storage, and uses of low-heat concentrated milk and skim milk
AUTHOR(S): Johnson, P. E.
CORPORATE SOURCE: Oklahoma State Univ., Stillwater
SOURCE: Milk Products Journal (1958), 49(No. 9), 8-10,40
CODEN: MPRJAB; ISSN: 0099-7099
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Processing details are given for the production of concentrated milk. Heat-treatment sufficient to prevent lipolytic action and to yield products not susceptible to development of oxidized flavor are indicated. Manufacturing data and organoleptic observations are tabulated for 25 lots of milk. By employing the min. heat-treatment in both forewarming and in the concentrating process, whole and skim milk can be concentrated and stored at temps. of -10.degree.F. or below for 3-6 months with very good results. When such a product is reconstituted and pasteurized it is very difficult if not impossible to distinguish it from the natural fresh product. This process can be used to preserve surplus milk for eventual use in the manufacture of milk beverages and the manufacture of other dairy products.

L28 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1955:86625 CAPLUS
DOCUMENT NUMBER: 49:86625
ORIGINAL REFERENCE NO.: 49:16330b-c
TITLE: Alcoholic beverage from milk
PATENT ASSIGNEE(S): Ch. Gervais S. A.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 986501		19510801	FR	19490309

AB A slightly alc. beverage is made by fermentation of pasteurized milk containing ≤ 1.7 g./l. lactic acid. Approx. 5% by volume of yeast, e.g. of the torula species, is added and the fermentation is conducted in 2 steps. In the 1st step, a temp. insufficient for alc. fermentation, e.g. 20-5.degree., but sufficient to ensure proliferation of the yeast cells is maintained. In the 2nd step, the temp. is raised to approx. 30-40. degree. and maintained for 30-48 hrs. The fermentation is then stopped by cooling and the product made ready for use by pasteurization.

L28 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1953:1337 CAPLUS
DOCUMENT NUMBER: 47:1337
ORIGINAL REFERENCE NO.: 47:225c-g
TITLE: New milk-preservation processes and their potentialities
AUTHOR(S): Webb, B. H.
CORPORATE SOURCE: U.S. Bur. Dairy Ind., Washington, DC
SOURCE: Canadian Dairy and Ice Cream Journal (1951), 30(No. 5), 31-4
CODEN: CDICAN; ISSN: 0366-5658
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB There is as yet no completely satisfactory method for the preservation of milk that will yield a product comparable in quality to market milk. Important tech. advances made in recent years indicate that it may be possible to preserve milk, either in frozen or in sterilized form, that will be acceptable as beverage milk. It is possible to do this now, but with serious limitations on the conditions and time of storage. Even with the solution of tech. difficulties, economic factors may delay or prevent widespread use of preserved forms of milk. Pasteurized, homogenized milk of good quality can be frozen and held at -10. degree.F. or lower for at least 4 months without serious loss in consumer acceptability. Pasteurized milk concentrated to a solids content of 36%, homogenized, frozen, and held at -10.degree.F. or lower will remain acceptable during storage periods up to at least 2 months. Homogenized milk sterilized at 285.degree.F. for 15 sec. and aseptically canned will have a mild heated flavor which will gradually give way to a stale flavor after 4 months of storage at room temp. Milk concentrated to half its volume, homogenized, sterilized at 285.degree.F. for 15 sec., and aseptically canned will have a heated flavor resembling that of boiled milk; this will gradually give way to a stale flavor after 10 weeks of storage at room temp. When these milks are held for longer periods of storage than those indicated, characteristic defects generally appear which render the products unacceptable as beverage milk. Coffee and whipping cream can be sterilized in the can at 245.degree.F. for 12 min. or in bulk at 285.degree.F. for 15 sec., then aseptically packaged. The cream will have a mild heated flavor. Difficult problems concerned with separation of fat during storage remain to be solved.

L28 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1907:12453 CAPLUS
DOCUMENT NUMBER: 1:12453
ORIGINAL REFERENCE NO.: 1:3033g-i,3034a-b
TITLE: Effect of Treating Milk with Carbon Dioxide Gas under Pressure
AUTHOR(S): Van-Slyke, L. L.; Boswofth, Alfred W.
CORPORATE SOURCE: Geneva
SOURCE: N. Y. Agr. Exp. Sta. Bull. (1907), 292, 371-84
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB (1) In making a study of the chemical changes in kumiss made from cows' milk, it was noticed that lactic acid forms in it much more slowly than in ordinary milk. This was found to be due to the action of CO2 under pressure. (2) A series of experiments was undertaken in order to ascertain the effect of CO2 under different pressures upon the development of lactic acid in milk. (3) The milk used was (a) fresh, separator skim-milk, (b) fresh whole milk, drawn and handled under good hygienic conditions, (c) fresh skim-milk pasteurized at 185. degree. F., and (d) fresh whole milk pasteurized at 185. degree. F. (4) The pressures of gas employed were 70, 150 and 175 lbs. per sq. in. (5) The most effective method of treating the milk was to

charge it with CO2 at the desired pressure in a tank such as is used in bottling establishments in preparing carbonated drinks and then to fill into bottles. (6) The carbonated milk was kept at temperatures 35-70.degree. F. (7) Pasteurized milk, carbonated, kept for 5 mo. with little increase of acidity. Fresh, whole milk carbonated, kept, in one experiment, for about the same length of time. (8) Carbonated milk makes a pleasant beverage and may find practical use as a healthful drink. It may also be found useful for invalids and children. (9) The effect of carbonating milk upon organisms other than lactic, under the conditions of our work, has not yet been studied.

L28 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:642894 CAPLUS
DOCUMENT NUMBER: 143:345922
TITLE: The development of a suitable manufacturing process for 'Benifuuki' green tea beverage with anti-allergic effects
AUTHOR(S): Nagai, Hiroshi; Maeda-Yamamoto, Mari; Suzuki, Yuko; Sato, Katsuhiko; Mitsuda, Hiromichi
CORPORATE SOURCE: Beverage Research & Development Laboratory, Asahi Soft Drinks Co Ltd, Ibaraki, 302-0106, Japan
SOURCE: Journal of the Science of Food and Agriculture (2005), 85(10), 1606-1612
CODEN: JSFAAE; ISSN: 0022-5142
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Epigallocatechin-3-O-(3-O-methyl) gallate (EGCG3''Me) has been reported to inhibit type I allergy better than epigallocatechin gallate (EGCG), a major catechin in tea leaves (Camellia sinensis L). We examined the effects of extraction and sterilization on the catechin content and histamine release from mast cells, as a representative reaction of early phase allergy, in the manufacture of 'Benifuuki' green tea beverage. Among various varieties of tea, the cultivar 'Benifuuki' contains approx. 2% of EGCG3''Me. Ester-type catechins and their epimers increased with the increased extraction temp. of the tea. A tea infusion, extracted at 90. degree., strongly inhibited histamine release from mast cells. Furthermore, sterilization affected the catechin content in the manufactured green tea beverage. Sterilization at high temp. promoted the isomerization of catechins and the sterilized green tea beverage had a strong inhibitory effect. When EGCG3''Me, EGCG, epicatechin-3-O-gallate (ECG) and their epimers, GCG3''Me (gallocatechin-3-O-(3-O-methyl) gallate), GCG (gallocatechin-3-O-gallate) and CG (catechin-3-O-gallate) were compared, the anti-allergic effect of GCG3''Me was strongest, and the order of activity was GCG3''Me > EGCG3''Me > GCG > EGCG. We consequently suggest that it was necessary to extract components from tea at the highest temp. possible, and to pasteurize under retort conditions (118.1.degree., 20 min), to manufacture functional green tea beverage with an anti-allergic action.
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:73022 CAPLUS
DOCUMENT NUMBER: 140:320167
TITLE: Aroma changes in green tea beverage during processing and storage
AUTHOR(S): Wang, Li-Fei; Sung-So; Baik, Joo-Hyun; Kim, Hyun-Jeong; Moon, Kyu-Soung; Park, Seung-Kook
CORPORATE SOURCE: Pacific Corporation Research and Development Center, Kyonggi-Do, 449-729, S. Korea
SOURCE: ACS Symposium Series (2004), 871(Nutraceutical Beverages), 162-188
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of different treatments on aroma changes in green tea beverage during processing and storage were studied. To prepare the green tea beverages, the steamed green tea leaves were further dried for 30 min at various temps. (a control, 120, 140, and 160 .degree.C), and than extracted with water for 10 min at 60 . degree.C. The exts. were pasteurized for 8 min at 120 .

degree.C, and stored at 50 .degree.C to accelerate the storage conditions. To compare the aroma changes caused by various pasteurization methods, some of the exts. were also heat processed at 115 and 125 .degree.C with various durations. The aroma changes of such treated exts. during heating and storage were evaluated by sensory methods. Some selected volatile compds. that are important for tea aromas were also analyzed using solid-phase microextn.-gas chromatog. method.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:222167 CAPLUS
DOCUMENT NUMBER: 138:237247
TITLE: Pasteurized hydrated emulsified lactylated glyceride food products and their method of preparation
INVENTOR(S): Murphy, Maeve; McGuire, James E.; Wosje, Duane C.; Langler, James E.
PATENT ASSIGNEE(S): General Mills, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003054086	A1	20030320	US 2001-952362	20010911
US 6998146	B2	20060214		
WO 2003022072	A1	20030320	WO 2002-US26983	20020808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002336396	A1	20030324	AU 2002-336396	20020808
US 2003224101	A1	20031204	US 2003-393838	20030321
US 7005157	B2	20060228		

PRIORITY APPLN. INFO.: US 2001-952362 A 20010911
WO 2002-US26983 W 20020808

AB The present invention provides methods for preparing at least pasteurized hydrated emulsifier compns. The methods for preparing an aseptic hydrated emulsifier comprise the steps of: A. Preparing a hydrated emulsifier blend of lactylated mono- and diglycerides; B. Treating the hydrated blend to at least pasteurize the blend to form an at least pasteurized hydrated emulsifier blend; and C. Cooling the at least pasteurized hydrated emulsified blend to refrigerator temps. In preferred embodiments, the present methods comprise substeps for preparing the hydrated emulsifier blend of lactylated mono- and diglycerides, comprising: admixing a first wetting agent emulsifier comprising sodium stearoyl lactylate with hot water to form a clear mixture; admixing a second emulsifier comprising a blend of lactylated mono- and diglycerides with the clear mixture; and maintaining the lactic ester blend of mono- and diglycerides at about 43-95.degree.C for sufficient time to disperse and hydrate the lactylated mono- and di-glyceride in the clear mixture to form a hydrated emulsifier blend. The hydrated emulsifier described herein is also useful in the aeration of food products such as yogurt, other refrigerated milk products, ready-to-spread frostings, fermented and unfermented soy, rice and nut milk products,

beverages, and whipped toppings.
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:462756 CAPLUS
DOCUMENT NUMBER: 133:42631
TITLE: Fruit puree-based beverages
INVENTOR(S): Hynes, Keiran; Ryall, John
PATENT ASSIGNEE(S): Woodlace Limited, Ire.
SOURCE: Brit. UK Pat. Appl., 16 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2339668	A	20000209	GB 1998-16904	19980805
GB 2339668	B	20020501		
PRIORITY APPLN. INFO.:			IE 1998-601 A	19980721

AB A liquid fruit puree-based beverage is manufactured by first tempering a frozen puree concentrate to a temp. of 1-4. degree.C over a period of ≥24 h. The tempered puree with water, sweetening agent and acidity regulator are added to a vessel, the ingredients in the vessel are then blended to substantially exclude air entrainment in the mixture A pre-set volume of the liquid puree mixture thus formed is filled into a bottle which is closed with a closure. The bottles are then passed through a pasteurizer at adequate temp. and time to transfer ≥1000 pasteurization units to the puree mixture, and the bottles of pasteurized puree mixture are packaged. The neck region of the bottles may be dried by a stream of hot air and printed with a code.

L28 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:114382 CAPLUS
DOCUMENT NUMBER: 132:121819
TITLE: Tea concentrate prepared by enzymatic extraction and xanthan gum stabilization.
INVENTOR(S): Lehmberg, Gregg Lance; Ma, Sheng Xue
PATENT ASSIGNEE(S): Thomas J. Lipton Co., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6024991	A	20000215	US 1996-763424	19961211
US 6036982	A	20000314	US 1996-763597	19961211
US 6274187	B1	20010814	US 1997-763592	19970228
PRIORITY APPLN. INFO.:			US 1996-19986P P	19960619
			US 1996-20304P P	19960619

AB A tea concentrate is prepared by enzymic extraction of the tea leaf with a combination of cell wall lytic enzymes and tannase; the concentrate is stabilized where necessary by xanthan gum, which is stable at ambient temp. Thus, xanthan gum is added to achieve a final concentration of 0.5-2.5% and a high shear force is used to dissolve the gum completely in the concentrate (critical for stability of the final product). The stabilized concentrate is pasteurized, aseptically packaged, and stored at room temp

.; ready-to-drink products prepared from 6-mo-old tea concs. deliver clear beverages with good organoleptic properties.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:5876 CAPLUS

DOCUMENT NUMBER: 118:5876

TITLE: Effects of ionic strength and pH on the thermostability of lactoferrin

AUTHOR(S): Kawakami, Hiroshi; Tanaka, Maki; Tatsumi, Kiyoshi; Dosako, Shunichi

CORPORATE SOURCE: Tech. Res. Inst., Snow Brand Milk Prod. Co., Ltd., Kawagoe, 350, Japan

SOURCE: International Dairy Journal (1992), 2(5), 287-98
CODEN: IDAJE6; ISSN: 0958-6946

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Lactoferrin retained over 85% of its iron-binding ability after heat treatment at an ionic strength of 0.01 or below and temps. from 65 to 90.degree.. At an ionic strength of 0.1, partial precipitation occurred and the iron-binding ability decreased markedly with the increase in temp. At pH 3.5, lactoferrin was resistant to heating at ionic strengths of 0.37 or below, but turbidity and precipitation occurred at ionic strengths above 0.47. The findings indicated that the thermostability of lactoferrin was dependent on both ionic strength and pH. In addition, the retention of lactoferrin in milk samples was over 95% during storage for 12 wk, whereas that in acid beverage decreased to 35% after 12 wk at 5.degree. and was destroyed after 2 wk at 37.degree.. The recommended method for the processing of foods containing lactoferrin is to pasteurize lactoferrin sep. at an elec. conductivity below 0.7 mS/cm and mix aseptically with neutral foods.

L29 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:531862 CAPLUS
DOCUMENT NUMBER: 139:307024
TITLE: Chitosan-containing acidified milk beverage
INVENTOR(S): Alieva, L. R.; Evdokimov, I. A.; Vasilisin, S. V.; Vorotnikova, T. S.; Bastrykina, N. A.; Anaiko, N. S.
PATENT ASSIGNEE(S): Severo-Kavkazskii Gosudarstvennyi Tekhnicheskii Universitet, Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2206216	C2	20030620	RU 2001-122820	20010814
PRIORITY APPLN. INFO.:			RU 2001-122820	20010814

AB An acidified milk beverage is obtained by adding 1-3% chitosan (colloidal solution in whey) and 5-10% acidophilic bacteria (e.g., Lactobacillus acidophilus) to milk (standardized for concentration, pasteurized, and homogenized) at 35-42°. The temp. of the milk is maintained at 35-42° for 3-4 h with subsequent cooling to 4-8° and maintenance at this cool temp. for 2 h. The acidified milk beverage is characterized by favorable biol. and structural and mech. properties, with prolonged shelf life and reduced production costs.

L29 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:865590 CAPLUS
TITLE: Ultra-high temperature milk concentrate package and method of producing same
INVENTOR(S): Reaves, Ronald A.; Howard, Ronnie L.; Senyk, Gary F.
PATENT ASSIGNEE(S): Moo Technologies, Inc., USA
SOURCE: PCT Int. Appl.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002089591	A1	20021114	WO 2001-US14927	20010507
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2446551	A1	20021114	CA 2001-2446551	20010507
AU 2001261302	A1	20021118	AU 2001-261302	20010507
EP 1389914	A1	20040225	EP 2001-935189	20010507
EP 1389914	B1	20060920		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
HU 200400084	A2	20040428	HU 2004-84	20010507

HU 200400084	A3	20051128			
BR 2001017003	A	20040622	BR 2001-17003		20010507
JP 2004528849	T	20040924	JP 2002-586741		20010507
CN 1536964	A	20041013	CN 2001-823457		20010507
AT 339893	T	20061015	AT 2001-935189		20010507
US 2001026825	A1	20011004	US 2001-850983		20010508
US 2003054079	A1	20030320	US 2002-254118		20020925
US 6887505	B2	20050503			
WO 2004028260	A1	20040408	WO 2003-US28457		20030911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
AU 2003272318	A1	20040419	AU 2003-272318		20030911
MX 2003PA10218	A	20050816	MX 2003-PA10218		20031107
IN 2003DN01918	A	20051216	IN 2003-DN1918		20031114
US 2004170727	A1	20040902	US 2004-790643		20040301
HK 1064003	A1	20070323	HK 2004-106195		20040818
PRIORITY APPLN. INFO.:			US 1999-433365	A	19991103
			US 2001-850983	A	20010508
			EP 2001-935189	A	20010507
			WO 2001-US14927	W	20010507
			US 2002-254118	A	20020925
			WO 2003-US28457	W	20030911

AB The method comprises heating a milk starting product to an elevated pasteurizing temperature under reduced pressure for an amount of time sufficient to evaporate liquid from the milk starting product to form a pasteurized, high-solids intermediate liquid milk concentrate, mixing an amount of cream with the intermediate milk concentrate to form a condensed liquid blend having a preselected amount of fat content to produce a reconstituted milk beverage having the desired taste characteristics, and adding a stabilizer material effective to ensure uniform distribution of and prohibit separation and settling of milk solids in the ultrapasteurized liquid milk concentrate during storage. The final liquid milk concentrate is ultrapasteurized, homogenized and packaged to form an ultrapasteurized liquid milk concentrate package for subsequent mixing of the ultrapasteurized milk concentrate with water to form said reconstituted milk beverage.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 10 OF 16 CAPLUS

ACCESSION NUMBER: 2002:440959 CAPLUS
DOCUMENT NUMBER: 137:80839
TITLE: Numerical modeling of turbulent heat transfer and fluid flow in a single-source tank in a tunnel pasteurization process
AUTHOR(S): Zheng, Y. H.; Amano, R. S.
CORPORATE SOURCE: Department of Mechanical Engineering, University of Wisconsin-Milwaukee, Milwaukee, WI, 53201, USA
SOURCE: International Journal of Transport Phenomena (2002), 4(1), 27-42
CODEN: IJTPFQ; ISSN: 1028-6578
PUBLISHER: Old City Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Beverages in bottles and cans are treated in a pasteurizer to lengthen shelf life. Traditional designers for

tunnel pasteurization processes choose multiple heat exchangers. In this paper a model for the heat transfer and fluid flow in a single source-sink tank in a tunnel pasteurizer, which can be used to predict the operation status of the pasteurization process of the beverages, is described. This modeling is useful to optimize the system by making a few changes to the design, operating conditions, or the types of products to be pasteurized. Moreover, the model can be used to provide data for the optimization of the pasteurization component designs. A single-tank heat exchanger is designed as the hot and cold water supply heat exchanger tank in this study. It is a cylindrical heat exchanger tank consisting of four tube-bundles that provides hot water through the top and cold water through the bottom of the tank. There are two outlets. In the heat exchanger tank, the tube arrays are set along the azimuthal direction in the tank. This is a thermally stratified layered water tank that can control the water temps. in four zones. The numerical calcns. of heat transfer and fluid flow were performed to determine the temp. distribution in the heat exchanger tank. Simulation results indicate that the modeling temp. distribution of each zone is in good agreement with anal. results.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:636545 CAPLUS
TITLE: Aroma changes in green tea beverage during processing and storage
AUTHOR(S): Wang, Li-Fei; So, Sung; Baik, Joo-Hyun; Kim, Hyun-Jeong; Moon, Kyu-Soung; Park, Seung-Kook
CORPORATE SOURCE: Tea Research Laboratory, Pacific Corporation R&D Center, Yongin-Si, Kyonggi-Do, 449-900, S. Korea
SOURCE: Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United States, August 26-30, 2001 (2001), AGFD-049. American Chemical Society: Washington, D. C.
CODEN: 69BUZP
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB This research was conducted to investigate the effects of different treatments on aroma changes in green tea beverage during processing and storage. To prepare green tea beverages, the steamed green tea leaves were further dried for 30 min at various temps. (a control, 120, 140, and 160 C), and they were extracted with water for 10 min at 60 C. The exts. were pasteurized for 8 min at 120 C, and stored at 50 C to accelerate the storage conditions. To compare the aroma changes caused by various pasteurization methods, some of the exts. were heat processed at 110 C and 130 C with various durations and stored at 50 C. The aroma changes of such treated exts. during heating and storage were evaluated by sensory method. Some selected volatile compds. that are important for tea aromas were also analyzed by using SPME-GC method.

L29 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:221007 CAPLUS
DOCUMENT NUMBER: 128:269875
TITLE: Process for preparing a flavoring agent for beverages
INVENTOR(S): Meister, Niklaus; Vikas, Martin
PATENT ASSIGNEE(S): Societe des Produits Nestle S.A., Switz.
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 834255	A1	19980408	EP 1996-202769	19961004
EP 834255	B1	20030625		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
AT 243429	T	20030715	AT 1996-202769	19961004
PT 834255	T	20031031	PT 1996-202769	19961004
ES 2202410	T3	20040401	ES 1996-202769	19961004
CA 2214548	A1	19980404	CA 1997-2214548	19970919
CA 2214548	C	20051108		
ZA 9708506	A	19990323	ZA 1997-8506	19970922
IN 183723	A1	20000325	IN 1997-MA2087	19970923
TW 411255	B	20001111	TW 1997-86113885	19970924
AU 9739903	A	19980409	AU 1997-39903	19971002
AU 719945	B2	20000518		
BR 9704966	A	19981027	BR 1997-4966	19971002
JP 10113122	A	19980506	JP 1997-270709	19971003
US 6060105	A	20000509	US 1997-943736	19971003
RU 2202214	C2	20030420	RU 1997-116581	19971003

PRIORITY APPLN. INFO.: EP 1996-202769 A 19961004

AB A flavoring agent for beverages (e.g., tea or coffee) consists of sweetened evaporated milk packaged in small individual units, the fat/non-fat solids being adjusted to appropriate values, the flavor being added, and the package being sterilized by ultrahigh-temp. treatment. Thus, pasteurized cream and pasteurized skim milk are combined to give a fat/non-fat solids ratio of 0.23-0.24 and concentrated by evaporation; disodium hydrogen phosphate, sucrose, and flavor are added to complete the formulation.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:219610 CAPLUS
DOCUMENT NUMBER: 128:256688
TITLE: Calcium-enriched milk, milk beverage or dietetic product and process for manufacture
INVENTOR(S): Jolivet, Elise; Niesseron, Luc; Schwan, Michael
PATENT ASSIGNEE(S): Societe Des Produits Nestle S.A., Switz.
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 832564	A1	19980401	EP 1996-202538	19960911
EP 832564	B1	20021204		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
AT 228770	T	20021215	AT 1996-202538	19960911
PT 832564	T	20030430	PT 1996-202538	19960911
ES 2186755	T3	20030516	ES 1996-202538	19960911
SG 87760	A1	20020416	SG 1997-3004	19970820
ZA 9707623	A	19990225	ZA 1997-7623	19970825
CA 2213869	A1	19980311	CA 1997-2213869	19970908
CA 2213869	C	20070220		
NO 9704140	A	19980312	NO 1997-4140	19970909
AU 9737460	A	19980319	AU 1997-37460	19970909
AU 728511	B2	20010111		
JP 10084910	A	19980407	JP 1997-244891	19970910
US 5897892	A	19990427	US 1997-926705	19970910
CN 1176745	A	19980325	CN 1997-118632	19970911

CN 1074905	B	20011121			
BR 9704692	A	19990105	BR 1997-4692		19970911
HK 1010120	A1	20030711	HK 1998-110990		19980925
PRIORITY APPLN. INFO.:			EP 1996-202538	A	19960911

AB Calcium-enriched milk, a milk beverage or a dietetic product are prepared by thermal treatment without thickening or gelling agents and have a pH close to the normal pH of milk. The products are homogeneous, do not show phase separation, and their flavor remains unaltered during storage. Thus, skim milk is pasteurized, enriched with calcium glycerophosphate, and trisodium citrate is added as a chelating agent. Ultrahigh-temp. treatment, homogenization, and chilling are used in the final steps.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:142624 CAPLUS

TITLE: The unique functional attributes of microcrystalline cellulose co-processed with inorganic salts.

AUTHOR(S): Buliga, Gregory S.; Venables, Aaron C.; Selinger, Edward

CORPORATE SOURCE: Food Ingredients Division, FMC Corporation, Princeton, NJ, 08543, USA

SOURCE: Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), POLY-382. American Chemical Society: Washington, D. C.
CODEN: 65QTAA

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB Avicel-plus! XP 3406 is a microcryst. cellulose (MCC) based ingredient that has been specially co-processed with calcium carbonate (CaCO3) and carboxymethyl-cellulose (CMC) to yield a highly effective stabilizer and a calcium fortification ingredient. The procedure of coprocessing MCC with CaCO3 results in ultra fine insol. MCC particles creating a highly effective gel matrix through the hydrogen bonding interaction with the CMC. The rheol. characterization of this new ingredient is compared to conventional MCC/CMC (Avicel) based products. Avicel-plus! XP 3406 offers enhanced stabilization of insol. calcium salts or other particulates at minimal viscosity. This is important in highly fluid type of food applications such as nutritional beverages, reduce fat milk, ice cream or frozen yogurt premixes. The suspension properties of XP 3406 is compared to other hydrocolloids. In addition to allowing for calcium addition, the patent pending technol. of Avicel-plus! XP 3406 delivers the same stabilizing benefits of conventional MCC/CMC products, such as ice crystal control, temp. stability in retort or pasteurized systems, fat mimetic properties, water binding, thixopropy, texture, suspension properties, foam & emulsion stability.

L29 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:278156 CAPLUS

DOCUMENT NUMBER: 122:104382

TITLE: Analysis of lactose-protein Maillard complexes in commercial milk products by using specific monoclonal antibodies

AUTHOR(S): Kato, Y.; Matsuda, T.; Kato, N.; Nakamura, R.

CORPORATE SOURCE: Tokaigakuen Women's College, Nagoya, 468, Japan

SOURCE: Special Publication - Royal Society of Chemistry (1994), 151(Maillard Reactions in Chemistry, Food, and Health), 188-94
CODEN: SROCDO; ISSN: 0260-6291

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Lactose-protein Maillard complexes were immunochem. analyzed in various com. milk products by ELISA and Immunoblotting using a specific monoclonal

antibody. The Maillard complexes were detected in all samples analyzed, i.e., modified milk powder, skim milk powder, market pasteurized milk, milk beverages and concentrated milk. The apparent contents of Maillard complexes did not necessarily correlate to the loss of free amino groups, and the contents were generally higher in powdered milk products and milk beverages than in the market pasteurized milk. There appeared to be some relationship between the content of Maillard complexes and the time and temp. for pasteurization. Caseins were the major proteins detected by the antibody as lactose-protein Maillard complexes in various com. milk products, though several whey proteins and unidentified polymerized proteins were also detected in some of the milk products. Thus, the monoclonal antibody was useful for in situ detection of lactose-protein Maillard adducts in milk and milk products.

L29 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:58975 CAPLUS
DOCUMENT NUMBER: 112:58975
TITLE: Discontinuous heat transfer in cylindrical beverage containers treated in a pasteurizer
AUTHOR(S): Guerreri, Gianfranco
CORPORATE SOURCE: Dip. Chim. Ind. Ing. Chim., Politec. Milan, Milan, Italy
SOURCE: Tecnologie Chimiche (1989), 9(7-8), 58-64
CODEN: TECCDK; ISSN: 0392-3452
DOCUMENT TYPE: Journal
LANGUAGE: Italian

AB Calcns. are presented of the coeffs. of heat transfer along the external cylindrical wall and horizontal wall of glass or metallic beverage containers treated in a pasteurizer, the temp. profile of the liquid in the container as a function of the radius with changing time in relation to the heat transfer from the cylindrical surface, and the axial temp. profile in the liquid with changing time in relation to the heat transfer from the horizontal surface. The discontinuous heating of containers and their liqs. in pasteurizers is due mainly to the cylindrical wall wetted by the hot water. The temp. of the immobile liquid and the container as a function of time can be described only by anal. of the convective phenomena. A portable temp. recorder can be used to monitor temp. vs. time.

L29 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1171469 CAPLUS
TITLE: Hot-fill beverage production with flavor injection
INVENTOR(S): Wu, Rei-Young Amos; Schutzenhofer, Richard; Chu, Osvaldo A.
PATENT ASSIGNEE(S): The Quaker Oats Company, USA
SOURCE: Eur. Pat. Appl., which
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1719419	A1	20061108	EP 2006-9242	20060504
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
US 2006286261	A1	20061221	US 2006-399286	20060405
JP 2007029080	A	20070208	JP 2006-128281	20060502
NL 1031748	A1	20061107	NL 2006-1031748	20060504
NL 1031748	C2	20070309		
CA 2545868	A1	20061106	CA 2006-2545868	20060505
DE 102006021067	A1	20070215	DE 2006-102006021067	20060505
BR 2006001621	A	20070109	BR 2006-1621	20060508
PRIORITY APPLN. INFO.:			US 2005-678546P P	20050506
			US 2006-399286 A	20060405

AB A method and system for producing a flavored beverage wherein the flavor is added in a sep. step to a combination of the base ingredients after the base liquid has been pasteurized by, for example, thermal heating. The flavor can be added to a continuous stream of the base liquid after a thermally processed hot-fill beverage base liquid is made up. A return loop conduit of the hot-fill beverage base liquid portion of the system is capable of diverting the heated hot-fill beverage base liquid in a stable state, i.e., at the desired temps. ready for continued beverage production, while the flavor may be switched over in a downstream flavor dosing portion of the system. The system may be used to produce a desired batch of flavored beverage by producing a first flavor, cleaning only that portion of the system to remove the first flavor and then changing over the flavor additive component to a desired second flavor.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:597283 CAPLUS
TITLE: Process for making beverage of fruits and/or berries
INVENTOR(S): Kravecs, Eduards
PATENT ASSIGNEE(S): Latvia
SOURCE: Latv.
CODEN: LAXXF6
DOCUMENT TYPE: Patent
LANGUAGE: Latvian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
LV 13256	B	20050620	LV 2004-115	20040924
PRIORITY APPLN. INFO.:			LV 2004-115	20040924

AB The present invention relates to the food industry, particularly to making beverage of fruits and/or berries using honey. The invented

process for making beverage of fruits and/or berries contains mixing juice of fruits and/or berries and honey together. The juice is taken in form of fresh-pressed natural juice, but honey is injected into mixture in form of water-solution (40 to 60 weight-%). It can be used also concentrated juice and corresponding amount of additional water. The obtained beverage has been pasteurized during 15 to 60 seconds at a temperature of 80 oC to 120 oC.

L29 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:259123 CAPLUS
DOCUMENT NUMBER: 145:355256
TITLE: Production and contamination of pasteurized beverages packed in sealed plastic containers in Thailand and potential preventive measures
AUTHOR(S): Chavasit, Visith; Kunhawattana, Supaporn; Jirarattanarangsri, Wachira
CORPORATE SOURCE: Institute of Nutrition, Mahidol University at Salaya, Nakhon Pathom, 73170, Thailand
SOURCE: Food Control (2006), 17(8), 622-630
CODEN: FOOCEV; ISSN: 0956-7135
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB From 35 premises that were sampled in this study, 86%, 69%, 59%, and 13% of pasteurized beverages packed in sealed plastic containers were contaminated with yeast, mold, coliform, or E. coli, resp. The products could be divided into two groups, i.e., heat sensitive and non-heat sensitive. At least 45% of the premises did not pass the Thai Food and Drug Administration (FDA) requirements for GMP. Chlorine treatment and temp. control were needed for heat sensitive products. Appropriate equipment and methods for double boiling, cooling, washing containers, and sanitizing utensils were developed. The developed systems were found to be feasible in four tested premises.
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1237126 CAPLUS
DOCUMENT NUMBER: 144:211435
TITLE: Processing and stability evaluation of isotonic beverages in plastic bottles
AUTHOR(S): Petrus, Rodrigo Rodrigues; Faria, Jose de Assis Fonseca
CORPORATE SOURCE: Departamento de Engenharia de Alimentos/Faculdade de Zootecnia e Engenharia de Alimentos, USP, Brazil
SOURCE: Ciencia e Tecnologia de Alimentos (Campinas, Brazil) (2005), 25(3), 518-524
CODEN: CTALDN; ISSN: 0101-2061
PUBLISHER: Sociedade Brasileira de Ciencia e Tecnologia de Alimentos
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: Portuguese
AB The preparation of isotonic beverage by using pasteurization and aseptic packaging in polyethylene terephthalate (PET) bottles stable at room temp. without chemical preservatives was studied. The plastic bottles were sanitized by mixture of 0.3% peracetic acid and 0.46% hydrogen peroxide sprayed for 5 s at 30°C. The formulated isotonic beverage with pH 3.40 and 0, 50 or 100 mg potassium sorbate/L was thermally processed in plate pasteurizer at 85°C/5 s and bottled. The beverage stability during storage at 25°C for 26 wk was evaluated by measuring pH, soluble solids, titratable acidity, ascorbic acid, microbial counts (total mesophilic aerobic bacteria, molds, yeasts), and sensory properties. There was no difference in pH, soluble solids and acidity of the processed beverages during the 26-wk

storage, except that ascorbic acid levels decreased to .apprx.30% of the initial value. At 26 wk the total counts of mesophilic aerobic bacteria and of molds and yeasts were ≤5.7 and <10 CFU/mL, resp. There were no sensory changes during the storage. Thus, the formulated isotonic beverage can be processed at the above conditions without chemical preservatives and stored at room temp. for at least 6 mo in good com. quality.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1043018 CAPLUS
DOCUMENT NUMBER: 144:190990
TITLE: Production of non-fermented milk containing Lactobacillus acidophilus UFV H2b20 isolated in Brazil
AUTHOR(S): Mendes de Figueiredo, Hamilton; Passos, Frederico Jose Vieira; Alencar de Moraes, Celia; Passos, Flavia Maria Lopes; Teixeira, Magdala Alencar
CORPORATE SOURCE: Departamento de Tecnologia, Universidade Estadual de Felra de Santana Coleglado de Engenharia de Allmentos Campus Universitario, Felra de Santana, CEP: 44031460, Brazil
SOURCE: Brazilian Journal of Food Technology (2004), 7(2), 139-144
CODEN: BJFTFR; ISSN: 1516-7275
URL: http://www2.ital.sp.gov.br/brazilianjournal/free/p04169.pdf
PUBLISHER: Instituto de Tecnologia de Alimentos
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: Portuguese
AB The production of non-fermented milk with added Lactobacillus acidophilus UFV H2b20 isolated in Brazil was studied. L. acidophilus was added at 105, 106, and 108 CFU/mL sterilized milk and the resulting non-fermented milk beverages were stored at 6, 8, 10, and 12°C fo 14 days. Microbial plate counts were determined every 2 days to verify cell viability. The milk pH and levels of lactic and acetic acids and galactose were determined by HPLC. The best bacterial cell inoculum was 106 CFU/mL which allowed milk storage at temps. up to 10°C for 12 days without substantial drop in pH; the min. limit of pH 6.5 was set for milk to be considered as normal. During this period the viable cell counts remained almost unaffected. Storage at 12°C decreased the viable cell counts and increased lactic acid production; the milk pH remained above 6.5 only for 10 days. Milk inoculation with 108 CFU/mL led to rapid production of lactic acid at low temps. (6°C), thus making the milk not suitable for human consumption from the second day of refrigerated storage. Thus, the com. production of non-fermented milk with 106 CFU/mL is feasible. The product shelf-life would be similar to that of normal pasteurized milk and with no substantial decrease in pH or viable cell counts.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:412767 CAPLUS
DOCUMENT NUMBER: 140:422846
TITLE: Heat pasteurized beverages containing glucosamine
INVENTOR(S): Rogers, Brent Daniel; Fosdick, Lawrence E.; Bohlmann, John Andrew
PATENT ASSIGNEE(S): Cargill, Incorporated, USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041198	A2	20040521	WO 2003-US34844	20031031
WO 2004041198	A3	20041202		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003148998	A1	20030807	US 2002-326549	20021219
US 7049433	B2	20060523		
US 2004077055	A1	20040422	US 2003-685125	20031013
CA 2502864	A1	20040521	CA 2003-2502864	20031031
AU 2003290567	A1	20040607	AU 2003-290567	20031031
EP 1558290	A2	20050803	EP 2003-783102	20031031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2006058263	A1	20060316	US 2005-533412	20050429

PRIORITY APPLN. INFO.:		
US 2002-423119P	P	20021101
US 2002-326549	A	20021219
US 2003-685125	A	20031013
US 2001-785695	A1	20010216
WO 2002-US4468	A	20020215
WO 2003-US34844	W	20031031

AB The disclosure provides methods of making heat-pasteurized liqs., such as beverages, that contain glucosamine, wherein glucosamine is present in the beverage during the pasteurization process. The disclosure also provides liqs., such as beverages, made by these methods, as well as methods of using the glucosamine supplemented liqs., for example to treat osteoarthritis.

L29 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:	2003:950492 CAPLUS
DOCUMENT NUMBER:	139:395162
TITLE:	Food products and their method of preparation
INVENTOR(S):	Engesser, Eric R.; Engesser, Michael D.; Murphy, Maeve; McGuire, James E.
PATENT ASSIGNEE(S):	General Mills, Inc., USA
SOURCE:	U.S. Pat. Appl. Publ., 8 pp., Cont.-in-part of U.S. Ser. No. 952,362. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003224101	A1	20031204	US 2003-393838	20030321
US 7005157	B2	20060228		
US 2003054086	A1	20030320	US 2001-952362	20010911
US 6998146	B2	20060214		

PRIORITY APPLN. INFO.:		
US 2001-952362	A2	20010911

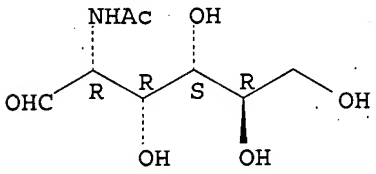
AB The present invention provides methods for preparing at least pasteurized hydrated emulsifier compns. The methods for preparing an aseptic hydrated emulsifier comprise the steps of: A. Preparing a hydrated emulsifier blend of lactylated mono- and di-glycerides; B. Treating the

hydrated blend to at least pasteurize the blend to form an at least pasteurized hydrated emulsifier blend; and, C. Cooling the at least pasteurized hydrated emulsified blend to refrigerator temps. forming a cooled pasteurized hydrated emulsifier blend. The hydrated emulsifier described herein is also useful in the aeration of food products such as yogurt, other refrigerated milk products, ready-to-spread frosting, fermented and unfermented soy, rice and nut milk products, beverages, and whipped toppings.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 7512-17-6 REGISTRY
ED Entered STN: 16 Nov 1984
CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-Glucose, 2-acetamido-2-deoxy- (8CI)
OTHER NAMES:
CN 2-Acetamido-2-deoxy-D-glucose
CN 2-Acetamido-2-deoxyglucose
CN 2-Acetamido-D-glucose
CN 2-Acetylamino-2-deoxy-D-glucose
CN Acetylglucosamine
CN D-N-Acetylglucosamine
CN Marine Sweet
CN N-Acetyl-2-amino-2-deoxy-D-glucose
CN N-Acetyl-2-amino-2-deoxyglucose
CN N-Acetyl-D-glucosamine
CN N-Acetylglucosamine
CN NSC 524344
FS STEREOSEARCH
DR 7132-76-5, 134-61-2, 173382-53-1, 98632-70-3
MF C8 H15 N O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6650 REFERENCES IN FILE CA (1907 TO DATE)
493 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6668 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L34 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:412768 CAPLUS
DOCUMENT NUMBER: 140:422798
TITLE: N-acetyl-D-glucosamine supplemented food products and beverages
INVENTOR(S): Rogers, Brent Daniel; Fosdick, Lawrence E.; Bohlmann, John Andrew
PATENT ASSIGNEE(S): Cargill, Incorporated, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041199	A2	20040521	WO 2003-US34846	20031031
WO 2004041199	A3	20040923		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003286848	A1	20040607	AU 2003-286848	20031031
US 2006003965	A1	20060105	US 2005-533414	20050429
US 2006172392	A1	20060803	US 2006-394981	20060331
US 2006178344	A1	20060810	US 2006-395013	20060331

PRIORITY APPLN. INFO.:

US 2002-423119P	P	20021101
US 2001-785695	B1	20010216
WO 2002-US25121	A2	20020807
US 2002-326549	A2	20021219
US 2003-685125	A2	20031013
WO 2003-US34846	W	20031031

AB Food products and beverages which include N-acetyl-D-glucosamine (NAG) are provided, as are methods of their preparation and use. Embodiments of the supplemented food products and beverages are heated to high temps., such as those used in pasteurization, without significant adverse effects on taste, color, odor and/or texture.

L34 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:412768 CAPLUS
DOCUMENT NUMBER: 140:422798
TITLE: N-acetyl-D-glucosamine supplemented food products and beverages
INVENTOR(S): Rogers, Brent Daniel; Fosdick, Lawrence E.; Bohlmann, John Andrew
PATENT ASSIGNEE(S): Cargill, Incorporated, USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041199	A2	20040521	WO 2003-US34846	20031031
WO 2004041199	A3	20040923		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003286848	A1	20040607	AU 2003-286848	20031031
US 2006003965	A1	20060105	US 2005-533414	20050429
US 2006172392	A1	20060803	US 2006-394981	20060331
US 2006178344	A1	20060810	US 2006-395013	20060331

PRIORITY APPLN. INFO.:

US 2002-423119P	P	20021101
US 2001-785695	B1	20010216
WO 2002-US25121	A2	20020807
US 2002-326549	A2	20021219
US 2003-685125	A2	20031013
WO 2003-US34846	W	20031031

AB Food products and beverages which include N-acetyl-D-glucosamine (NAG) are provided, as are methods of their preparation and use. Embodiments of the supplemented food products and beverages are heated to high temps., such as those used in pasteurization, without significant adverse effects on taste, color, odor and/or texture.

L36 ANSWER 24 OF 26 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:114783 CAPLUS
DOCUMENT NUMBER: 134:168078
TITLE: Skin care of food composition containing n-acetyl-glucosamine
INVENTOR(S): Matahira, Yoshiharu; Saito, Michiko
PATENT ASSIGNEE(S): Yaizu Suisan Kagaku Industry Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1075836	A2	20010214	EP 2000-303523	20000427
EP 1075836	A3	20010425		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001048789	A	20010220	JP 1999-225245	19990809
TW 253905	B	20060501	TW 2000-89107810	20000426
CN 1283413	A	20010214	CN 2000-108263	20000428
HK 1034648	A1	20050722	HK 2001-105502	20010808
JP 2005211078	A	20050811	JP 2005-106262	20050401
PRIORITY APPLN. INFO.:			JP 1999-225245 A	19990809

AB The present invention provides a skin care agent comprising N-acetylglucosamine as an active ingredient. The skin care agent is preferably in the form of tablets, capsules, powder such as dust or granules, liquid or paste. The skin care agent of the present invention may be incorporated into foods such as confectioneries, powdered soup and beverages. By orally ingesting the skin care agent of the present invention, the N-acetylglucosamine as an active ingredient is rapidly absorbed, and by utilizing a part thereof as a starting material of acidic mucopolysaccharides such as hyaluronic acid or chondroitin sulfate, the moisture and tension of skin can be improved and the rough skin and fine wrinkles can be prevented or ameliorated. For example, a significant improvement in females with xeroderma and rough skin was observed by administration of N-acetylglucosamine tablets (200 mg/tablet, 5 tablets/day) for 8 wk, compared to females taking placebo of non-NAG-containing tablets.

L37 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:874165 CAPLUS
DOCUMENT NUMBER: 136:5158
TITLE: Health drinking water.
INVENTOR(S): Makino, Hideya; Muto, Masayuki
PATENT ASSIGNEE(S): Yoshida, Isao, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001333750	A	20011204	JP 2000-158080	20000529
PRIORITY APPLN. INFO.:			JP 2000-158080	20000529

AB The health drinking water contains mainly mineral water with the addition of glucosamine, chitosanoligosaccharide, N-acetylglucosamine, and chitinoligosaccharide.

L38 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:230126 CAPLUS
DOCUMENT NUMBER: 142:446265
TITLE: Chemical indicators of heat treatment in fortified and special milks
AUTHOR(S): Mendoza, Maite Rada; Olano, Agustin; Villamiel, Mar
CORPORATE SOURCE: Instituto de Fermentaciones Industriales (CSIC), Madrid, 28006, Spain
SOURCE: Journal of Agricultural and Food Chemistry (2005), 53(8), 2995-2999
CODEN: JAFCAU; ISSN: 0021-8561
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Carbohydrate and furosine contents in 12 com. fortified and special milk samples (pasteurized goat's and ewe's milks; ultrahigh-temperature (UHT) goat's milk, UHT milks fortified with calcium, magnesium, fiber, or royal jelly and honey; and lactose-hydrolyzed milks) were analyzed. Except for lactose-hydrolyzed milks, furosine, lactose, lactulose, galactose, glucose, N-acetylgalactosamine, N-acetylglucosamine, and myo-inositol contents were similar to the previously reported values for UHT or pasteurized milk samples. In lactose-hydrolyzed milks, lactulose was not detectable and lactose was present in low amount; high levels of glucose, galactose, fructose, tagatose, and furosine were also detected in this type of milk. Results found in com. milks were compared to those obtained in laboratory-prepared UHT milks with lactose hydrolyzed prior to heating. Hydrolysis of lactose before thermal treatments promoted elevated accumulation of reducing sugars (galactose and glucose) that could be partially converted to the corresponding isomers (tagatose and fructose) during heating. In addition, the reducing sugars could also react with the amino groups of proteins, giving rise to the corresponding Amadori compound According to the obtained results, heating prior to hydrolysis of lactose is suggested to avoid a considerable loss of available lysine.
REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:312191 CAPLUS
DOCUMENT NUMBER: 135:75987
TITLE: Influence of refrigeration and carbon dioxide addition to raw milk on microbial levels, free monosaccharides and myo-inositol content of raw and pasteurized milk
AUTHOR(S): Ruas-Madiedo, Patricia; De los Reyes-Gavilan, Clara G.; Olano, Agustin; Villamiel, Mar
CORPORATE SOURCE: Instituto de Productos Lacteos de Asturias (CSIC), Villaviciosa, 33300, Spain
SOURCE: European Food Research and Technology (2000), 212(1), 44-47
CODEN: EFRTFO; ISSN: 1438-2377
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of CO2 treatment on free monosaccharides and myo-inositol in raw and pasteurized milk during cold storage was studied. Pasteurization did not cause significant changes in the monosaccharide fraction. No variations in the level of galactose and myo-inositol in untreated and CO2-treated samples were observed during cold storage. The content of glucose decreased considerably during cold storage due to bacterial growth in pasteurized milk. During cold storage of pasteurized milk no changes in N-acetylgalactosamine were observed,

whereas N-acetylglucosamine decreased considerably after 15 days. No differences between untreated and CO2-treated milks were found. A substantial decrease in N-acetylglucosamine and a gradual increase in N-acetylgalactosamine were observed in raw milk during cold storage. The former was attributed to consumption of this hexosamine by microorganisms and the latter was probably due to microbial glycosidic enzymes. The addition of CO2 to raw milk proved to be a useful treatment for milk preservation without modifying the free monosaccharide fraction.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:128651 CAPLUS

DOCUMENT NUMBER: 124:173976

TITLE: Monosaccharides and myo-Inositol in Commercial Milks

AUTHOR(S): Troyano, Esperanza; Villamiel, Mar; Olano, Agustin; Sanz, Jesus; Martinez-Castro, Isabel

CORPORATE SOURCE: Instituto de Fermentaciones Industriales, Madrid, 28006, Spain

SOURCE: Journal of Agricultural and Food Chemistry (1996), 44(3), 815-17
CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Monosaccharides (galactose, glucose, tagatose, 3-deoxypentulose, N-acetylglucosamine, and N-acetylgalactosamine) and myo-inositol were determined by gas chromatog. in different types of market milk (pasteurized, dried, UHT, and in-container sterilized). Glucose, myo-inositol, and N-acetylhexosamine concns. were similar to those previously found in raw milk and showed no variations due to sample type. Sterilized milk samples were characterized by the presence of tagatose and 3-deoxypentulose and, thus, could be clearly distinguished from UHT samples. The galactose level, which was found to be higher in the samples submitted to stronger thermal treatment, seems to be also a useful indicator for milk classification.

L45 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:75078 CAPLUS
DOCUMENT NUMBER: 50:75078
ORIGINAL REFERENCE NO.: 50:14135h-i,14136a-b
TITLE: Stability of small concentrations of penicillin in milk as affected by heat-treatment and storage
AUTHOR(S): Shahani, K. M.; Gould, I. A.; Weiser, H. H.; Slatter, W. L.
CORPORATE SOURCE: Ohio State Univ., Columbus
SOURCE: Journal of Dairy Science (1956), 39, 971-7
CODEN: JDSCAE; ISSN: 0022-0302
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB A study was conducted to determine the effect of heat and storage on the loss of potency of small concns. of K penicillin in milk, 1% phosphate buffer (pH 6.0), and water. Also a comparison was made of the heat stability of five different penicillins added to milk. Penicillin concns. of 0.13 to 1.07 I.U. per mL. were added to water, buffer, and milk. Portions of each were subjected to temps. of 143.degree.F. for 30 min., 160.degree .F. for 30 min., and 250.degree.F. for 15 min. The unheated and heated lots were then stored at 34.degree.-38. degree.F. and assayed for penicillin every day for periods up to 7 days. Antibiotic activity was determined by the disk-assay method. The results revealed that penicillin in milk developed smaller zones of inhibition than did the same concentration in buffer or water. Five different kinds of penicillin were found to vary in heat stability. Upon heat-treatment, penicillin was destroyed in an increasing order in milk, buffer, and water. On storage, the penicillin lost its potency at a faster rate in milk and water than in buffer. Also, the storage losses of the antibiotic were less in the milk samples heated at higher temps. than in the raw samples or in the samples pasteurized at 143.degree.F. Within the limits studied, the concentration of the antibiotic and degree of inactivation by heating or storage exhibited no relationship. Penicillin in milk was relatively more heat stable, but less stable during storage than were streptomycin and Aureomycin.

L45 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1962:33701 CAPLUS
DOCUMENT NUMBER: 56:33701
ORIGINAL REFERENCE NO.: 56:6424e-g
TITLE: Influence of different methods of heating on the electrophoretic pattern of whey proteins
AUTHOR(S): Brown, J. W.; Aurand, L. W.; Roberts, W. M.
CORPORATE SOURCE: North Carolina State Coll., Raleigh
SOURCE: Food Technology (Chicago, IL, United States) (1961), 15, 480-2
CODEN: FOTEAO; ISSN: 0015-6639
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Densitograms, plotted from paper electropherograms, show the effect of batch pasteurization, autoclaving at 250.degree. F., and steam injection at 220, 260, and 300.degree.F. for 2 sec. on the immune globulin, α-lactalbumin, and β-lactoglobulin of whey protein. Pasteurizing caused little change, but autoclaving denatured all proteins. Denaturation increased as preheating temp. increased before steam injection, as injection temp. increased, and as rate of cooling decreased. Proteins from milk preheated at 130. degree.F., steamed at 220.degree.F., and instantaneously cooled, were approx. equivalent to the proteins from pasteurized milk.

L45 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1960:99008 CAPLUS
DOCUMENT NUMBER: 54:99008
ORIGINAL REFERENCE NO.: 54:18816e-h
TITLE: Differentiation of reactivated from residual phosphatase in high temperature-short time pasteurized milk and cream
AUTHOR(S): McFarren, E. F.; Thomas, R. C.; Black, L. A.; Campbell, J. E.
CORPORATE SOURCE: Public Health Serv., Cincinnati, O.
SOURCE: Journal of the Association of Official Agricultural Chemists (1960), 43, 414-26
CODEN: JOACAZ; ISSN: 0095-9111
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Reactivation was studied, whereby a pos. test cannot be attributed to bacterial phosphatase (I) and hence indicative of inadequate pasteurization. The details of a continuous-flow, high-temp .-short-time (HTST) laboratory pasteurizer, used to produce reactivatable I in milk and cream, and of a spectrophotometric method based on the Scharer modified laboratory and field tests, for measuring I are given. Optimum conditions for I reactivation were established at a pasteurization temp. of 220-230 and 220-250. degree.F., stored with a MgCl2 concentration of about 1.5 for cream and 2.0% for whole milk, and at 34.degree.C. after pasteurization. A I test was developed for differentiating reactivatable from residual (inadequate pasteurization) based on the 8-14-fold increase in activity of reactivatable I in milk and cream stored under the above optimum conditions; residual (raw) I will exhibit essentially no increase in activity under similar conditions. I of both forms may occur simultaneously under certain specific conditions; no greater increase than a 4-5-fold increase in activity has ever been observed. The differentiation test has been applied without failure to numerous samples of laboratory HTST milk and cream and successfully used to detect reactivatable I in 30% cream pasteurized com. by the "vacreator."

L45 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:75078 CAPLUS
DOCUMENT NUMBER: 50:75078
ORIGINAL REFERENCE NO.: 50:14135h-i,14136a-b
TITLE: Stability of small concentrations of penicillin in milk as affected by heat-treatment and storage
AUTHOR(S): Shahani, K. M.; Gould, I. A.; Weiser, H. H.; Slatter, W. L.
CORPORATE SOURCE: Ohio State Univ., Columbus
SOURCE: Journal of Dairy Science (1956), 39, 971-7
CODEN: JDSCAE; ISSN: 0022-0302
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A study was conducted to determine the effect of heat and storage on the loss of potency of small concns. of K penicillin in milk, 1% phosphate buffer (pH 6.0), and water. Also a comparison was made of the heat stability of five different penicillins added to milk. Penicillin concns. of 0.13 to 1.07 I.U. per mL. were added to water, buffer, and milk. Portions of each were subjected to temps. of 143.degree.F. for 30 min., 160.degree .F. for 30 min., and 250.degree.F. for 15 min. The unheated and heated lots were then stored at 34.degree.-38. degree.F. and assayed for penicillin every day for periods up to 7 days. Antibiotic activity was determined by the disk-assay method. The results revealed that penicillin in milk developed smaller zones of inhibition than did the same concentration in buffer or water. Five different kinds of penicillin were found to vary in heat stability. Upon heat-treatment, penicillin was destroyed in an increasing order in milk, buffer, and water. On storage, the penicillin lost its potency at a faster rate in milk and water than in buffer. Also, the storage losses of the antibiotic were less in the milk samples heated at higher temps. than in the raw samples or in the samples pasteurized at 143.degree.F. Within the limits studied, the concentration of the antibiotic and degree of inactivation by heating or storage exhibited no relationship. Penicillin in milk was relatively more heat stable, but less stable during storage than were streptomycin and Aureomycin.

L45 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1932:39562 CAPLUS
DOCUMENT NUMBER: 26:39562
ORIGINAL REFERENCE NO.: 26:4107b-f
TITLE: The detection of inefficiently pasteurized milk based on a modification of the new Rothenfusser test
AUTHOR(S): Gould, Bernard S.
SOURCE: Journal of Dairy Science (1932), 15, 230-41
CODEN: JDSCAE; ISSN: 0022-0302
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB G. has modified the R. test (C. A. 25, 1004) so that it is now possible to detect milk heated below 60.degree. for 30 min. or milk heated at 60.degree. for less than 30 min. This modified test can detect as little as 1% of raw milk in the pasteurized product, as well as small amts. of under-pasteurized milk in a pasteurized one. The modified test is: Shake 30 cc. of the milk thoroughly with 1.8 cc. of basic Pb acetate; 2 cc. of Hcl and acid-free $CHCl_3$ are added, and the mixture is again shaken and centrifuged for 15-20 min. Ten cc. of the clear serum (unfiltered) is then mixed with 0.5 cc. of starch solution and incubated at 37.5.degree. for 4 hrs. After incubation, 1.5 cc. of the mixture is poured into a small tube, and 1.5 cc. of a 0.001 N I (I-KI) solution added. The colored solution is immediately placed in the comparator block and compared with a standard slide of 1.15 red-tint units

and 1.00 blue- tint units. The appearance of blue in excess of the standard indicates heating above 60.degree. (140.degree .F.) for 30 min. A distinct red or orange indicates heating below the pasteurization temp., insufficient holding, or the presence of small amts. of raw or poorly pasteurized milk. A yellow color indicates raw milk or milk heated not above 50.degree.. The stable starch solution is prepared by grinding 10 g. of soluble starch (Merck & Co., according to Lintner) with 10 cc. of water and adding to 500 cc. of boiling water. This solution is boiled gently for 10 min., and 150 cc. of pure glycerol (sp. gr. 1.23) is added. This should make a clear solution Boiling is continued for 10 min., then 6 g. of NaCl in 50 cc. of water is added, followed by 5 cc. of 0.25 N NaOH. This is filtered hot, 250 cc. of 95% alc. is added in 50 cc. portions and the mixture diluted to 1000 cc. with boiled water; this is cooled and allowed to stand for a day or two. The supernatant liquid is decanted from any sediment and placed in bottles which are then heated in a water bath at about 65.degree. (not over) for 30 min.

L45 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1917:303 CAPLUS
DOCUMENT NUMBER: 11:303
ORIGINAL REFERENCE NO.: 11:78f-i,79a
TITLE: Artificial milk
INVENTOR(S): Melhuish, W. J.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1509626		19150701	GB	

AB An artificial milk for human or animal use is made from peanuts, soy beans, a sugar, H2O, and mineral salts usually found in milk . To make 300 pts. of the milk, 200 pts. of purified H2O at 80. degree. are made alkaline by 400 gr. of K2HPO4 or the equivalent amount of Na2HPO4 or MgO or MgCO3, 2/3 of the sugar (preferably the lighter malted dextrins in sirup form used by brewer and of a total quantity to give 4.5 % in the finished milk) is stirred in with addition of MgCO3, if necessary, to keep alkaline, and 40 lbs. of meal from the blanched nuts, or nuts that have been boiled with dilute Na2CO3 until the skins no longer stain the solution, are agitated in the liquid at 75-85.degree. for 20-30 mins. to extract and emulsify the oil and legumin; the mass is then filtered and pressed, and 1/4 fluid oz. of 50% butyric acid stirred in drop by drop to impart a milk-like taste and appearance. 18 3/4 lbs. of soy bean meal are heated in a steam-jacketed pan to remove the flavor and then 100 pts. of H2O, with alkali phosphate, if necessary, are added gradually with stirring for 45 mins. to extract the soluble proteins and oil to form at least 0.5% of the liquid, the temp. being maintained at 95.degree.. The nut and bean exts. are sucked into a vacuum pan as opposing sprays with the remaining sugar, 250 gr. of Ca3(PO4)2, and 500 gr. of Na2HPO4, and boiled for 30 mins. under a reduction of pressure of of 26-29 in. The liquid is strained, concentrated, or diluted to 300 pts., rendered alkaline, if necessary, by NaHCO3, treated with a culture of lactic bacteria until the required acidity is obtained, pasteurized at 60-70.degree. for at least 20 mins., cooled, and stirred while 0.05-0.11% of citric acid is added. The milk so produced may be condensed or dried to a powder in the usual way. It may be given a cream by addition of coconut or other tasteless fat and longer boiling in the vacuum pan, and may be cultured sufficiently to give a table cream or a soured mass for churning. The residual meals are mixed, dried to 10% H2O content, and used as cattle food.

L45 ANSWER 14 OF 15 MEDLINE on STN
ACCESSION NUMBER: 2005117169 MEDLINE
DOCUMENT NUMBER: PubMed ID: 15747728
TITLE: Potential applications of high pressure homogenisation in processing of liquid milk.
AUTHOR: Hayes Maurice G; Fox Patrick F; Kelly Alan L
CORPORATE SOURCE: Department of Food and Nutritional Sciences, University College, Cork, Ireland.
SOURCE: The Journal of dairy research, (2005 Feb) Vol. 72, No. 1, pp. 25-33.
Journal code: 2985125R. ISSN: 0022-0299.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200507
ENTRY DATE: Entered STN: 8 Mar 2005
Last Updated on STN: 7 Jul 2005
Entered Medline: 6 Jul 2005

AB Studies of the potential of high pressure homogenisation (HPH) for the combined pasteurisation/ homogenisation of raw bovine milk were undertaken. Raw milk was preheated to 45 degrees C and HPH-treated at 150, 200 or 250 MPa; milk outlet temperature at these pressures were 67, 76.8 and 83.6 degrees C, respectively; with a holding time of approximately 20 s. Raw and commercially pasteurized and homogenized (CPH) milk samples were analysed as controls. Fat globules in HPH samples were approximately half the size of those in CPH samples, although differences were not significant (P>0.05). beta-Lactoglobulin was denatured at pressures > or =150MPa, although little denaturation of alpha-lactalbumin was observed. Numbers of psychrotrophic bacteria in raw milk were reduced by 2.73 log cycles by HPH at 150 MPa and were uncountable following HPH at 200 or 250 MPa. Mesophilic bacterial counts were reduced by 1.30, 1.83 and 3.06 log cycles by HPH at 150, 200 or 250 MPa, respectively. No viable Staphylococcus aureus nor coliform cells remained in any HPH milk samples. HPH did not affect the colour of milk and HPH samples did not cream during refrigerated storage. The activities of plasmin, alkaline phosphatase and lactoperoxidase in milk were all greatly reduced by HPH. Pseudomonas fluorescens, inoculated into milk (approximately 10(6) cfu/ml), was reduced to undetectable levels by HPH at 200MPa (milk inlet temperature, approximately 10 degrees C); however, Ps. fluorescens proteinase was quite resistant to HPH under such conditions. Overall, owing to the significant increase in temperature and the possibility of varying the holding time, there may be potential applications for HPH as a novel liquid milk processing technique, combining many advantages of conventional homogenization and pasteurization of milk in a single process.

L45 ANSWER 15 OF 15 MEDLINE on STN
ACCESSION NUMBER: 2003255382 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12778570
TITLE: Sensory threshold of off-flavors caused by proteolysis and lipolysis in milk.
AUTHOR: Santos M V; Ma Y; Caplan Z; Barbano D M
CORPORATE SOURCE: Departamento de Nutricao e Producao Animal, Faculdade de Medicina Veterinaria e Zootecnia, Universidade de Sao Paulo, Pirassununga, SP, Brazil.
SOURCE: Journal of dairy science, (2003 May) Vol. 86, No. 5, pp. 1601-7.
Journal code: 2985126R. ISSN: 0022-0302.
PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200307
ENTRY DATE: Entered STN: 4 Jun 2003
Last Updated on STN: 1 Aug 2003
Entered Medline: 31 Jul 2003

AB The objective of this study was to determine the sensory threshold of off-flavor caused by lipolysis in 2% fat milk and to establish the relationship between increased proteolytic activity in milk and the detection of bitter off-flavor. Homogenized raw milk was held at room temperature for 100 min to allow the native milk lipase to release free fatty acids from the triglycerides. Low and high lipolysis pasteurized milk containing 2% fat were blended together in varying amounts to create a series of six milks with increasing free fatty acid (FFA) concentration for sensory evaluation. Sensory threshold for lipolysis in 2% fat milk was determined by ascending forced-choice procedure, with a series of triangle tests in four sessions with 25 panelists in each session. The group best estimated threshold was the geometric mean of the individual thresholds within each of four panel sessions. The geometric mean best estimated detection thresholds for off-flavors caused by lipolysis in 2% fat milk carried out by native milk lipases were 0.320, 0.322, 0.351, and 0.316 meq of FFA/kg milk for panels 1 to 4, respectively. One third of the panelists detected an off-flavor at or below 0.250 meq of FFA/kg milk. To establish the relationship between proteolysis and detection of off-flavor in pasteurized skim milk, 2800 ppm of CO2 were added to pasteurized skim milk, and it was stored for 27 d at 6 degrees C. Another portion of the same milk was frozen on d 1 at -40 degrees C for use as a low proteolysis portion of the same milk. Decrease in casein as a percentage of true protein (CN/TP) was used as an index of proteolysis. After 27 d at 6 degrees C the milk had a decrease in CN/TP of 4.76% and a standard plate count of 430 cfu/ml. The novel approach of storing milk at 6 degrees C for 27 d with added CO2 blocked microbial growth but allowed proteolytic degradation by milk enzymes to proceed. Before sensory analysis, CO2 was removed by vacuum from the high proteolysis milk and the low proteolysis milk was given the same heat and vacuum. Two triangle tests were performed to determine whether panelists could detect off-flavors caused by proteolysis in milk. The threshold detection of off-flavor in skim milk produced by the action of native milk proteases was less than a decrease of CN/TP of 4.76%, but this value is probably near the threshold.

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     (FILE 'HOME' ENTERED AT 13:06:49 ON 19 AUG 2007)

     FILE 'CAPLUS, MEDLINE' ENTERED AT 13:07:05 ON 19 AUG 2007
L1             3 S NAG (P) PASTEUR?
L2             0 S N-GLUCOSAMINE? (P) PASTEUR?
L3            29 S N-ACETYLGLUCOSAMINE? (P) PASTEUR?
L4             0 S L3 AND CHITIN?
L5             0 S L3 AND BIOMASS?
L6             0 S L3 AND FUNGAL?
L7             0 S L3 AND BEVER?
L8           181 S BEVERAGE? (P) PASTEURIZE?
L9            43 S BEVERAGE? (P) PASTEURIZE? (P) TEMP?
L10            1 S BEVERAGE? (P) PASTEURIZE? (P) TEMP? (P) 200
L11            2 S BEVERAGE? (P) PASTEURIZE? (P) TEMP? (P) SEDIMEN?
L12           41 S L9 NOT L11
L13            6 S L12 AND SUGAR?
L14           35 S L12 NOT L13
L15            0 S L14 AND PRECIPITA?
L16            0 S L14 AND PRECIPIT?
L17            2 S L14 AND PURI?
L18           33 S L14 NOT L17
L19            2 S L18 AND PURE
L20            0 S L18 NOT L9
L21            0 S L14 NOT L9
L22           31 S L18 NOT L19
L23            4 S L22 AND BACTER?
L24           27 S L22 NOT L23
L25            0 S L24 AND CONTAMIN?
L26           31 S L22 NOT SPOIL?
L27            0 S L24 AND SPOIL?
L28           15 S L24 AND DEGR?
L29           16 S L26 NOT L28

     FILE 'REGISTRY' ENTERED AT 13:52:59 ON 19 AUG 2007
               E N-ACETYLGLUCOSAMINE/CN
L30            1 S E3

     FILE 'CAPLUS, MEDLINE' ENTERED AT 13:56:06 ON 19 AUG 2007
L31         9732 S L30
L32           44 S L31 AND BEVERAGE?
L33            0 S L32 AND PASTER?
L34            1 S L32 AND PASTEUR?
L35           43 S L32 NOT L34
L36           26 S L35 AND FOOD?
L37           17 S L35 NOT L36
L38            3 S L31 AND PASTEURIZE?
L39            0 S L31 AND PASTEURISE?
L40          233 S L31 AND MILK
L41           38 S L40 AND DEGREE?
L42         4754 S MILK (P) PASTEURIZE?
L43          796 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE?
L44           43 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE? (P) 200
L45           15 S MILK (P) PASTEURIZE? (P) TEMP? (P) DEGREE? (P) 250
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